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# *The* AMERICAN RIFLEMAN



Published By  
The National Rifle Association of America  
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NOVEMBER, 1928

25 CENTS




## ... And Again the High Man was Using the Brand!

NO NECESSITY of introducing you to the famous Dewar Team shown above. You probably know them by sight. And their World's Record score of 7,881 during the recent Camp Perry meet is *still* being talked about!

A number of the members of this team, including V. Z. Canfield, depended on the  brand to back their skill. And the results prove they placed their confidence in *exactly* the right place! Mr. Canfield was high scorer for the entire team with a prize total of 398 x

400 \* \* \* while the combined average of *all* the men shooting Peters was likewise above the team average!

Peters ammunition is perfected in the most completely equipped ballistic laboratory in the world! Every Peters employee is a specialist in his line, handling materials of super-quality! Is it any wonder an ever-increasing number of leading riflemen are switching to the  brand? These men demand unerring accuracy, uniform performance, and real results \* \* \* and they get them!

**THE PETERS CARTRIDGE COMPANY**

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**PETERS**  
AMMUNITION

# START THE GALLERY SEASON RIGHT!

NOVEMBER again, boys! What does it mean to you? If you live in the country, it means more harvesting and collecting that man-sized pile of wood outside the kitchen door, not to mention making the hard cider on the side. If you're a city dweller, you begin sneaking a few afternoons off from the office to see a football game or two and then regret it when the coal bill comes in. BUT, it doesn't make any difference where you live, if you're a rifle shooter—this means the beginning of the gallery season. AND HOW!

Are you ready for it? Is your rifle just right and have you plenty of targets? How about all the little, important accessories, such as patches, oil, rods, brushes? We have all of them—priced right. Ask for a price list.

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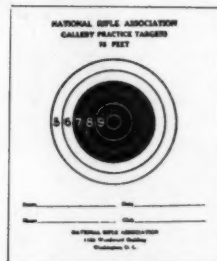
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Stazon—The Handy Kit, \$1.



## ITEM NO. 4

### GALLERY PRACTICE TARGETS

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*Sitting (left to right)—Mrs. L. Mona, Miss Elsie Hellwig, Mrs. H. Grahame;  
Standing—Miss Edna Pommer, H. M. Thomas, coach, Miss Hilda Anderson.*

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Tune in on Station KYW, Chicago, Nov. 17; WBZ, Springfield, and WBZA, Boston, Nov. 24; KDKA, Pittsburgh, Dec. 1; KYW, Dec. 8, and WBZ-WBZA, Dec. 15, and get the radio thrill of a lifetime—the first five of the series of unusual broadcasts to the lonely, isolated pioneers of the Arctic and sub-Arctic—sponsored by Winchester Repeating Arms Co., New Haven, Conn.—11 p. m., Standard Eastern Time—10 p. m., Central Time—9 p. m., Mountain Time—8 p. m., Pacific Time.

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TRADE MARK

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These girls of the Quinnipiac team have added another palm to the glory of American small-bore shooting for 1928.

And in this pioneer field of ladies' international competition each member of this American team used

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THE GREAT SMALL-BORE COMBINATION

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**Choice of Champions for  
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for 300-yard matches:**

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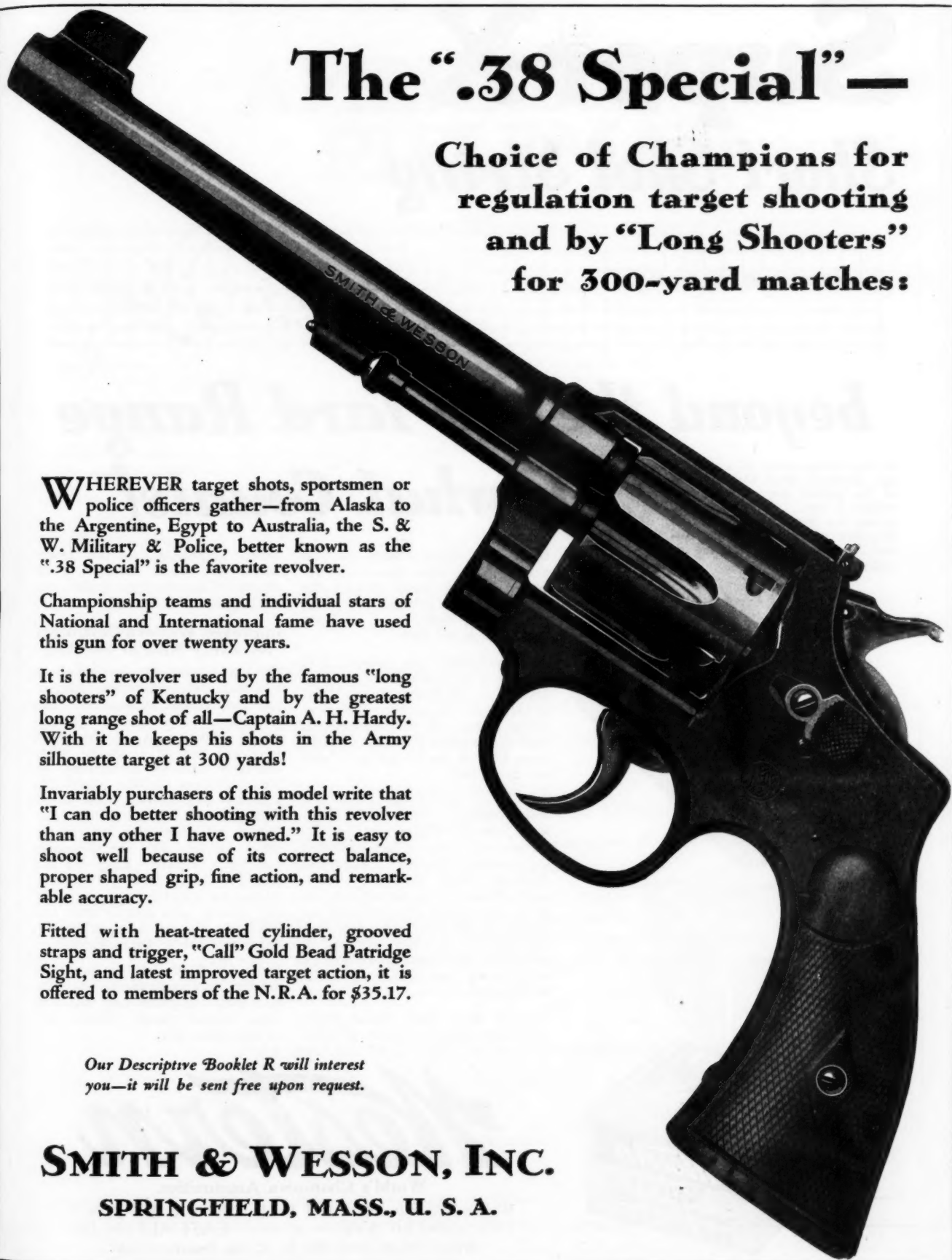
It is the revolver used by the famous "long shooters" of Kentucky and by the greatest long range shot of all—Captain A. H. Hardy. With it he keeps his shots in the Army silhouette target at 300 yards!

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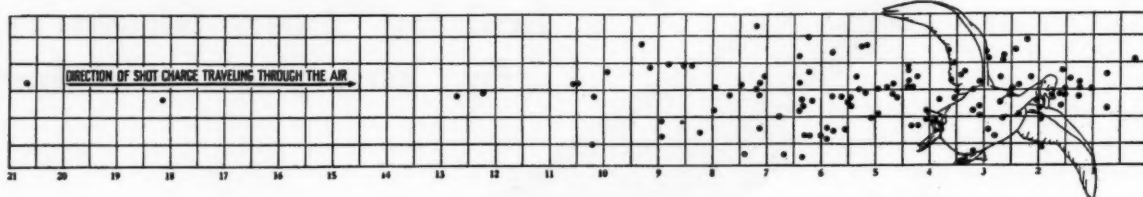
*Our Descriptive Booklet R will interest you—it will be sent free upon request.*

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## Short Shot String



**beyond the 40 Yard Range  
is what Counts!**

In the above chart of an average *Super-X* shot string most of the pellets are concentrated within 6 feet. Ordinary loads string out nearly twice as far. Shooters are learning that *Super-X* has practically twice as many effective pellets.

Short Shot String means that the pellets in the shot charge hold together as they travel through the air, instead of stringing out along their line of flight. . . . More pellets reach the bird.

WESTERN's long-range *Super-X* load gives close patterns and short strings not only at the shorter distances but at the longer ranges, too. Short Shot String beyond the 40-yard range is what counts when you want to make clean kills on ducks and geese that are flying high.

Control of shot string is not new with WESTERN. Six years ago, before *Super-X* was placed on the market, our experts had perfected the patented WESTERN Shot-String Machine which accurately determines the exact position of each pellet at any desired distance from the muzzle of the gun. This ingenious machine for years has been used as a part of the regular daily tests to which every load of *Super-X* shells is subjected.

*Super-X* Short Shot String means practically twice as many effective

pellets, especially at the longer ranges—and better patterns at all ranges. When you get a shot you get a duck—with *Super-X*.

### Improved Western Cartridges for Every Kind of Shooting

*Super-X* is one of many important WESTERN developments in shotgun, rifle and revolver ammunition. The hard-hitting *Xpert* shell for all-round shooting is a top-quality smokeless load at a popular price. WESTERN *Lubaloy* (lubricating alloy) cartridges combine remarkable accuracy with freedom from barrel fouling, ease of cleaning, bore protection and lengthened life for the gun. *Lubaloy* .22's are Greaseless and Non-Corrosive. Keep you and your gun clean. *Lubaloy* Pistol cartridges are noted for their accuracy and recently were used by team and individual winners of important National matches at Camp Perry.

Write for details. If you have any difficult shooting problems, our technical staff will gladly help you with them, without charge. Always glad to hear from you.



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# *The* AMERICAN RIFLEMAN

Vol. LXXVI

## TABLE OF CONTENTS

No. 11

NOVEMBER, 1928

Cover Photo <i>Courtesy</i> COUNT V. DA GAMA	Are We Going Too Fast? ..... 21 <i>By</i> B. S. ALBERTSON, JR.
International Rifle Matches—1928 ..... 7 <i>By</i> COL. D. C. McDOUGAL	Thoughts ..... 22 <i>By</i> DONEGAN WIGGIN
Telescope Sights ..... 12 <i>By</i> CHAS. ASKINS	The Compensated Shotgun ..... 23 <i>By</i> COL. R. M. CUTTS
Double Express Rifles—Another Viewpoint ..... 13 <i>By</i> COUNT V. DA GAMA	Latest Styles in Inner Tubes ..... 25 <i>By</i> LT. COL. CALVIN GODDARD
Pennsylvania Handmade Rifles ..... 15 <i>By</i> GILBERT IRWIN	N. R. A. News ..... 28
A Model 1917 Enfield Sporter ..... 16 <i>By</i> L. J. HATHAWAY	N. R. A. Junior News ..... 32
Shotgun—and Rifle, Too ..... 18 <i>By</i> CAPT. CHARLES L. GILMAN	Director Civilian Marksmanship ..... 36
A Tyro's Test On Rapid Fire with the .38 Special Revolver ..... 19 <i>By</i> A. R. MENDIZABAL	Dope Bag ..... 37
	Arms Chest ..... 46

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# EDITORIAL

## Everybody's Business

THE situation in this country in regard to anti-firearms laws is rapidly approaching the point where it becomes the business of every citizen to look into what his legislators propose to do. A few years ago the pistol and revolver shooters were fighting a lone battle against laws aimed at the elimination of the pistol from the category of American firearms. It was repeatedly pointed out in *THE AMERICAN RIFLEMAN* and in *Arms and the Man* that the agitation for anti-pistol legislation afforded a splendid opportunity for those who would see America completely disarmed to drive in an entering wedge on their project. Such an argument, however, made but little impression on the type of near-sighted police official, public reformer and legislator who saw in the handgun the root of all things criminal.

The first concrete evidence of the truth of the warning was presented last year in Pennsylvania when, under the provisions of the so-called Salus bills, the rifle would have been practically outlawed in one of the greatest hunting States in the country and the shotgun would have been surrounded by restrictions designed to make it an obsolete weapon in that great State of sportsmen and hunters. The bill was killed, but it took a hard fight to kill it.

Now comes agitation along similar lines in another great State which has long been famous for the caliber of its riflemen—the State of Massachusetts. In Massachusetts last year there was passed at a night session of the State Legislature, in a manner which indicated the most careful planning on the part of those behind the bill, one of those pistol-permit laws to which the National Rifle Association is unalterably opposed. This bill was slipped through without the knowledge of The Adjutant General of Massachusetts, the State Ordnance Officer of Massachusetts, or any of the shooters in the State. Having so driven their entering wedge, the element which is trying in one way or another to disarm America is now proposing a second attack and have enlisted the support of well-intentioned but short-sighted individuals who are now appearing as the sponsors of additional legislation. The new legislation will propose to eliminate in the State of Massachusetts the use of any rifle larger than the .22-caliber rim-fire and the use of any shot in a shotgun larger than No. 2. With such legislation on the books it will be a comparatively simple matter within a short time to so surround the purchase of .22-caliber rifles and of shotguns with restrictions requiring permits to purchase, special taxes and permits to carry and possess, as to completely eliminate from the shooting picture one of those very States which were carved from the wilderness, taken from foreign dominion and defended time after time with the rifle and pistol.

Probably one man in ten in the United States shoots a rifle, pistol or shotgun. Unless these shooters begin now to educate the nine non-shooters along the proper lines, there is no question but that we will within a comparatively short time in this country be faced with the European idea of private game preserves, permits to own all types of firearms, and shooting only for the limited number who can afford membership in private shooting clubs and who have sufficient political "drag" to obtain the necessary permits to purchase, possess and shoot shotguns, rifles or pistols. The anti-gun element have now completely shown their hand. This fight has ceased to be only the pistol shooters' business. It is no longer the rifle and pistol shooters' business alone—it is *everybody's* business. Don't make the mistake of thinking that only a limited number of reformers are going to support such legislation. With their plausible arguments, with the aid of funds which will be coming from unknown sources of supply for the conduct of any propaganda which will disarm the United States, this comparatively small group will persuade millions of non-shooters to their way of thinking. There is only one way to meet such an organized campaign. That is with a campaign which is just as well organized and just as intelligently directed. Fortunately for the American shooter, the framework of such an organization exists. Experienced hands are available to guide it. For more than half a century the National Rifle Association has been fighting the shooters' battles. **Through generation after generation, the fellow who likes his hunting but who isn't interested in target shooting has failed to see any reason why he should support this Association. The reason for his support is now becoming so apparent that "he who runs may read."**

Leaving the shotgun shooters for the moment out of the picture, there are approximately a million men in the United States who shoot the rifle or pistol at some time during the year. Banded together in one organization, the power of all the pacifists, anti-pistol reformers, and "Reds" in America would be puny against the efforts of these shooters.

There is no need to tell the readers of *THE AMERICAN RIFLEMAN* of the danger of the present situation. They know it. That is one reason they are supporting the National Rifle Association. However, it is up to *them* to describe in no unmistakable terms the real situation to the other shooters who have not in the past been able to see any reason for tying up with the National Rifle Association. They have looked on the organization as a target-shooters' outfit. They have not realized the real scope of its activities nor the real need of its existence.

This editorial does not describe a visionary picture. It covers facts as they exist today. The business of the N. R. A. is today *everybody's* business. Tell them so.

# The AMERICAN RIFLEMAN

Vol. LXXVI

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## International Rifle Matches—1928

By COL. D. C. McDUGAL, *Captain, U. S. A. International Rifle Team*

UPON the return of the American International Rifle Team from the International Rifle Matches held at Rome in 1927, the consensus of opinion of the shooters on the team was that among the reasons for their defeat were the superior speed in lock time, and the superior balance, of the Martini rifle; and it was also believed that a higher velocity ammunition was required.

The committee of the National Rifle Association charged with the project of sending over a team for 1928 decided that in equipping the 1928 team every ground for complaint would be removed and that the shooters would be supplied with the ammunition and rifles which they believed were essential to success.

Accordingly, an order was placed by the Ordnance Department, U. S. Army, with Haemmerli & Co., of Switzerland, for ten Martini rifles, chambered for the Springfield cartridge but exactly the same in other respects as the Swiss match rifles. Thirty Martini actions were also ordered at the same time with the idea that in case the ten Swiss barrels did not come up to expectations the thirty actions would be fitted with Springfield barrels and finished in a manner similar to the ten Martini match rifles; the surplus rifles and actions to be sold to shooters.

At the same time Frankford Arsenal undertook to work out a load which would give the highest attainable accuracy with a muzzle velocity of 2,700 feet. The result of the test of this ammunition was published in *THE AMERICAN RIFLEMAN* of June, 1928; and in the International Matches fired in Holland the ammunition fully came up to expectations, and was found to be as accurate as, if not more accurate than, the Swiss ammunition, or in fact any other ammunition in the matches.

While the order for the rifles was placed late in the fall, the rifles were not received by the team squad until May, many unexpected delays having taken place.

Upon receipt of the ten match rifles at Frankford Arsenal they were gauged and fired in the machine rest. The gauging brought to light the fact that the rifles were chambered to incorrect dimensions; and that while the lands came up to standard measurements, the grooves exceeded in depth the Springfield tolerances. As I remember it, the bore diameter was .3000, while the groove diameter ran around .3130. The chronograph measurements of the velocities showed a loss of about 100 feet, and bullets recovered after firing showed marks of gas leakage. The groups made with these rifles in the machine rest ran around  $4\frac{1}{2}$  to  $5\frac{1}{2}$  inches, extreme spread. This was a disappointment, but it was decided to place these ten rifles in the hands of the team squad for practice, and to replace them as soon as Springfield Arsenal could fit the Springfield barrels to a set of actions to replace the original ten.

Fourteen rifles, completed in Springfield, were fired in the machine rest before being sent to Quantico, and the groups given by these rifles came fully up to expectations.

The selection of the team and the scores made in the tryouts were published in *THE AMERICAN RIFLEMAN* of June, 1928.

During the period of the team practice a weekly team match was fired. There being ten in the squad, it was possible to divide the squad into two sections, distributing the shooters so that the teams

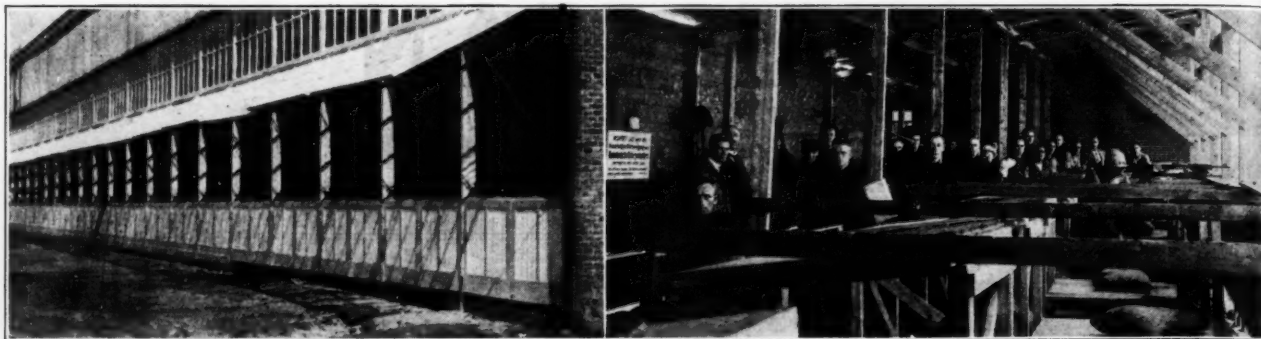
would be as nearly equal as possible. The scores made in these matches steadily improved. In the last match fired before sailing, the scores made by the five men who shot in the International Matches in Holland were as follows:

Bruce	1,099
Dinwiddie	1,086
Hinds	1,073
Seitzinger	1,111
Woods	1,083

Total 5,452

The total score of the five *high* men in the team squad who shot in this same match was 5,473. These scores being away over all past world's records, it was felt that, in personnel, rifles and ammunition we had a winning combination.

The team sailed from New York on S. S. *Nieu Amsterdam*, June 23; and after a comparatively smooth trip landed in Holland on July 3. There our troubles commenced. We had expected to be met by a member of the Royal Dutch Rifle Association who could advise us how to handle the question of transportation of ammunition from the dock to our hotel. The American Express Co. representative who met us was unable to get us in touch with whomever was supposed to meet us and we had to solve this problem ourselves. We found that the police regulations were such that we could not ship the ammunition by passenger train, nor could it be moved by motor truck. The only way, we were told, that we would be permitted to transport the ammunition would be by horse-drawn vehicle. So, after getting police permits to do so, a horse and wagon were procured and two members of the team rode this wagonload of ammunition and team property from Rotterdam to The Hague, a distance of about 15 miles; while the remainder of the team, with light baggage, was moved by bus, making the journey in about two hours. A tired-out horse with two very tired team members and the ammunition arrived at the hotel in the early evening. We were then informed that the ammunition would have to be turned over to the custody of the Royal Rifle Association, where it would be put under guard and each day we could go to the range with their representative and draw out the ammunition we would require for the day's practice. As the range where this ammunition was to be stored was at Loosdruijn, about 6 miles from the hotel, and the range where we were to practice was near Rotterdam, about 15 miles in the opposite direction, this arrangement appeared to be unworkable. However, we were informed that it was a police regulation and could not be modified. Also, we were told that each individual must immediately be provided with a police card with his photograph, which would permit him to carry a rifle through the streets with the breech covered and not in a condition to fire. We were also informed that the range at Loosdruijn, where the matches were to be held and where we had expected to practice, would not be ready for about a week; but in the meantime we were invited to use the range of a rifle club at Kralingsche Plas, near Rotterdam. The charge for using this rifle club would be 40



Where the shooting was done

cents per hour per target, plus the hire of markers at about one dollar per day per marker. Also, the question of travel to and from this range could not be simplified by moving the team to the vicinity of Rotterdam during the period of practice as the Royal Dutch Rifle Club had made a contract with our hotel which we would be unable to break.

We solved the ammunition problem by making two trips to the rifle range and drawing sufficient ammunition to cover the entire practice period and match, leaving a sufficient number of boxes to keep the guard usefully employed.

On July 4 team practice commenced on the Kralingsche Plas range, it being necessary to take a trolley car to Schrevineugen, thence to Rotterdam by electric train, and from Rotterdam to the range by bus. A lunch was provided at the range at a moderate cost by the range-keeper.

During the period we spent on this range the spare set of rifles was tried out and each man then selected the rifle with which he intended to shoot the match, holding a second rifle as a spare. Considerable alterations were necessary on the stocks to fit several members, and we had the usual amount of trouble with trigger springs, broken firing springs and firing pins.

Not having received any programs of the matches until our arrival in Holland, although repeated written and cabled requests had been made for them, it was necessary during this period to translate and have typewritten the match program and International Match Rules, as these were not printed in English.

The scores made during this practice period were somewhat disappointing, but

this was attributed to the effects of the ocean voyage and to the change in food and climate; and, to some degree, to the working-in of the new rifles. However, when the doubtful rifles had all be replaced a steady improvement was shown. Light and wind conditions were much more difficult than at Quantico, and we were never quite



able to make the scores of our last week's practice there. Indeed, the team soon found the reason for the windmills in Holland. The scores we were making, however, were so much better than the previous year's that we felt that the team had an excellent chance of winning.

On July 11 we commenced practice on the International Rifle Range at Ockenburgh,

Three views of rifle used by Zimmerman of the Swiss team



Loosdruijn, where we continued until the conclusion of the matches on July 25.

We found that according to program no targets would be provided for practice except on the day before the International Team Match, when the team of each nation would be provided with one target free of charge. In the meantime, in order to get practice it would be necessary to shoot re-entry matches and other matches that paralleled the International Match course. In order to give an idea of the cost of this practice, the following extracts of the program are quoted:

*Categorie C1*—Rifle Club Delegates' Match, distance 300 meters, open to five shooters, five series of ten shots; entrance fee, \$2; position, standing or kneeling.

*Categorie C2*—Individual Single-Entry Match, standing or kneeling; entrance fee, \$1, plus 60 cents for one supplementary string.

*Categorie C3*—Standing or kneeling, six strings of three shots; entrance fee, 40 cents.

*Categorie C4*—Re-Entry Match, standing or kneeling, three-shot string; entrance fee, 20 cents.

*Categorie C5*—Master Firers' Championship, standing, kneeling, and prone, sixty shots; entrance fee, \$4 per card. Limited to two cards.

No provision had been made for any re-entry matches in the prone position. In order to get practice in the prone position an arrangement was made with the committee by which a standing or kneeling ticket in any of the re-entry matches could be shot prone but the score not to count for record, as it was obvious that there had been an oversight in preparing the program. By this arrangement many excellent scores in the prone position were fired at the cost of a match

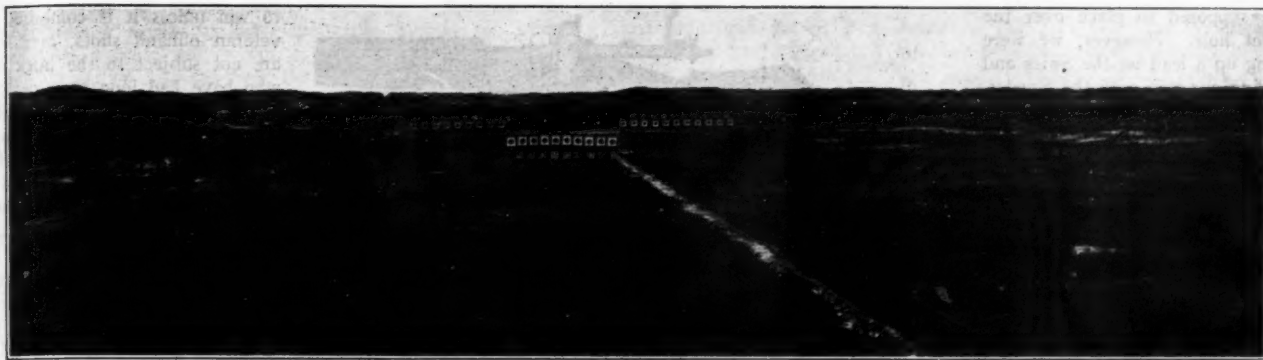
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*The range, showing 200- and 300-meter butts*

ticket, but with no chance of winning any prize. Also, in computing the prize money distribution it was found that in one match the prize money for the first nine places was less than the entry fee of nine shooters.

The rifle range at Ockenburgh was ten kilometers (6 miles) from our hotel and not on any tram line or accessible in any way except by bus or taxi. The range was in the open, the butts being very close to a large dike, and the stand being a large wooden building with a glass front, the glass panels in front of the shooters being hinged at the top and propped open during the firing. The flooring was of sand and shells; and the firing benches, of the conventional European pattern, were hinged in the middle with a step for the shooter in the kneeling position. The benches could be moved so that in the prone position the firer could lie at the angle he selected. No mattresses were provided, but ordinary front doorstep cocoa mats were supplied on which the elbows could be rested. This was very satisfactory, as the elbows did not slip on this mat and it afforded a sufficient protection to prevent the elbows from becoming sore. For the kneeling position, rather large burlap cushions stuffed with hay were provided. These were about the size of the conventional sofa cushion and gave ample support.

There were a number of matches for the Arm de Guerre, which had to be shot with the Dutch military rifle; but as this was entirely different from the shooting we expected to do in the big match, no member of the team squad entered these matches.

A temporary structure had been built in which tables were provided for the noon meals, which were supplied by a caterer from town. At the end of this mess hall was a large horseshoe table at which were seated the range officials and distinguished visitors. Each day a team captain and a delegate of one of the teams was invited to

sit at this table, where a series of speeches were made and the local orators were given an opportunity to do their stuff. The teams were expected to buy their own liquids, which in our case consisted of bottled water at 40 cents per bottle, no water or other liquids being provided free. All the speeches were in Dutch, other languages jority of the understand. seemed to be game and gave number of handle the chow low the local a chance to be be well to put gram as one of tions, charging substantial allowing no re-

No drinking plied on the had quite a caterer for own water in The caterer a cover charge but four the team staff, ten to the brought their in the team

The program national Match for the Inter-provided for the match to be fired in three days, one position each day, and each nation to have one target. This would have required the same time limit for each position, as under the rules unfinished scores of one position could not be carried forward to the next



*Three views of one of the Spanish team's Mauser rifles*

day, and in order to keep up with the time limit the standing position would have to be shot at a rate of less than two minutes per shot.

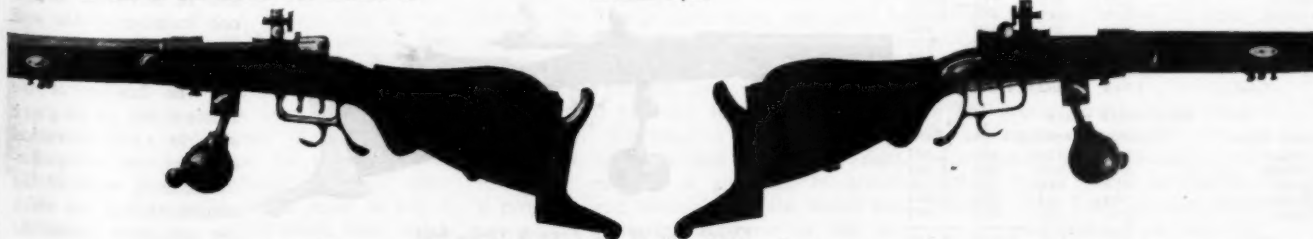
There being twenty-two targets available and only eleven teams present, this feature of the program was changed, each team being assigned two targets and the order of positions being left to the option of the team captain. Also, any string commenced before "Cease firing" in the noon period and at the end of the day could be completed.

The night before the match the five shooters were selected after a careful summing up of past performances and the last week's scores. All of the squad being nearly equal, this was a difficult task and boiled down to trying to select the five men and rifles that at this time were shooting at their peak.

On July 24 the matches commenced; a clear, bright day with a light breeze varying from 10 to 11 o'clock, with a heavy mirage—so heavy that bullet holes in the target could not be picked up through the spotting scopes.

We decided to shoot half of the prone and all the standing on the first day to avoid the danger of being caught in the standing position in case the wind blew hard on the second day, as the open front of the shooting stand did not protect the firer from head winds. The Swiss elected to shoot part of the prone the first day and all of the kneeling, leaving the second day for the standing and the unfinished prone. They played in luck in this, as on the second day there was no more wind than on the first day. Had the wind blown on the second day, it might have been a different story.

Our prone scores were somewhat off from our practice scores, due to the very bright light, heavy mirage and the absence of spotters, the Dutch idea being to have a hole in the center of the marking disk, which the man in the pit, several feet below the target,



was supposed to place over the bullet hole. However, we were piling up a lead on the Swiss and holding our own with the Swedes. When we finished the prone shooting for the day we were 30 points ahead of the Swiss at the rate we were going, and about even with the Swedes. No other competitors were near us.

With this lead we commenced our standing, and here our trouble began. The International rule is, that the rifle having once been raised from the barrier or rest, any shot fired counts; but if a set trigger lets go while the rifle is resting on the barrier, the shot does not count. The shooter who had commenced his offhand had fired several shots and was making a good score. He had been holding his piece at his shoulder, and took it down to rest. When the barrel was about two inches from the barrier the trigger let go, and we were charged up with a miss. Here is where the breaks come in shooting. Had that rifle reached the barrier before it got off, I think we would have continued to hold our lead; but this unlucky shot shook up the whole team and pulled down our following scores. That same rifle again let go for a wide one, which was another expensive accident; and two other pieces of hard luck, a 10 and an 8 on the wrong targets, completed the jinx. In the kneeling position the team held its own with the Swiss, finishing with a total of 1,815 against the 1,825 of the Swiss, with an 8 and a 10 on the wrong target for us.

The team finished with a total of 5,339, which is 30 points better than any match score we have ever shot before; but the Swiss put up the phenomenal score of 1,698 points offhand, which gave them a team total of 5,391, beating the previous world's record of 5,386. Following are the detailed scores of the three high teams, and as a matter of interest, the U. S. A. scores of all the International Matches in which this country has participated.

#### FREE-RIFLE INTERNATIONAL HISTORY

The U. S. Team first fired this match in 1913. Individual scores of our team from that year to date follow:

1913, THIRD PLACE				
United States:	Standing	Kneeling	Prone	Total
Knuebel .....	279	326	354	959
Eddy .....	278	318	343	938
Sweeting .....	270	300	343	913
Long .....	274	278	339	891
Heidenreich .....	296	278	302	877
Total .....	1,396	1,501	1,581	4,578

1914. United States did not enter.  
1915-1920, inclusive. No competition.

1921, FIRST PLACE				
United States:	Standing	Kneeling	Prone	Total
Stokes .....	326	357	372	1,055
Osburn .....	322	341	369	1,032
Fisher .....	290	331	369	990
Christian .....	299	304	372	975
Rotrock .....	277	319	367	963
Total .....	1,514	1,652	1,849	5,015

1922, FIRST PLACE				
United States:	Standing	Kneeling	Prone	Total
Stokes .....	336	356	375	1,067
Osburn .....	341	335	365	1,041
Boles .....	314	344	368	1,026
Fisher .....	304	344	363	1,011
Lloyd .....	282	334	371	987
Total .....	1,577	1,713	1,842	5,132



Springfield Rifle used by a member of the French team

1923 (NO OTHER TEAMS COMPETED)				
United States:	Standing	Kneeling	Prone	Total
Fisher .....	338	367	385	1,090
Stokes .....	334	358	377	1,069
Nueslein .....	339	352	371	1,062
Boles .....	335	337	379	1,051
Osburn .....	326	331	372	1,029
Total .....	1,672	1,745	1,884	5,301

1924, FIRST PLACE				
United States:	Standing	Kneeling	Prone	Total
Fisher .....	328	365	382	1,075
Stokes .....	333	351	383	1,067
Coulter .....	317	360	382	1,049
Osburn .....	322	345	381	1,048
Boles .....	312	355	378	1,045
Total .....	1,612	1,766	1,906	5,284

1925, SECOND PLACE				
United States:	Standing	Kneeling	Prone	Total
Dodson .....	343	349	369	1,061
Boles .....	333	344	378	1,055
Coulter .....	323	351	378	1,052
Fisher .....	334	342	375	1,051
Morgan .....	323	342	371	1,036
Total .....	1,656	1,728	1,871	5,255

1926, NO COMPETITION				
1927, THIRD PLACE				
United States:	Standing	Kneeling	Prone	Total
Bruce .....	320	361	389	1,070
Dodson .....	328	359	378	1,065
Martin .....	331	356	373	1,060
Coulter .....	320	345	377	1,042
Nueslein .....	327	336	371	1,034
Total .....	1,626	1,757	1,888	5,271

LOOSDUINEN, 1928 (U. S. THIRD PLACE)				
1. Switzerland:	Standing	Kneeling	Prone	Aggregate
Reich .....	347	368	377	1,092
Hartmann .....	339	370	382	1,091
Zimmermann .....	340	374	371	1,085
Lienhard .....	332	356	374	1,062
Pelli .....	340	357	364	1,061
Total .....	1,698	1,825	1,868	5,391
2. Sweden:	Standing	Kneeling	Prone	Aggregate
Olle Eriksson .....	341	368	384	1,093
Maur. Eriksson .....	335	363	388	1,086
G. Andersson .....	339	342	374	1,055
E. Olsson .....	327	348	380	1,055
J. Wester .....	310	363	377	1,050
Total .....	1,652	1,784	1,903	5,339
3. United States:	Standing	Kneeling	Prone	Aggregate
Dinwiddie .....	336	365	376	1,077
Hinds .....	331	368	376	1,075
Bruce .....	335	358	377	1,070
Woods .....	324	264	374	1,062
Seitzinger .....	313	360	382	1,055
Total .....	1,639	1,815	1,885	5,339

From a comparison of the above scores it is apparent that the match is won or lost in the standing position. No team can hope



Other side of the French Springfield

to win unless it is composed of veteran offhand shots, men who are not subject to the buck and who have had long practice with set triggers, the set trigger being so different from our conventional National Match trigger pull that unless a shooter has used the set trigger for a long time he is liable to get poor scores in a match where the pressure of match conditions is so different from practice.

I am not entirely sold on the Martini rifle. I think that the Springfield rifle is more accurate, due to a better seating of the bullet made possible by the bolt. The Martini action does not permit this, as the block will not close on a tight-fitting cartridge. The lock action of the Springfield can be speeded up a little more; and by stocking the rifle similar to the Swiss rifle stock and butt plate so as to give the rifle the same balance as the Martini, I believe that we would have a rifle which would have a higher precision than the Martini, and would have the same nice balance and quick firing action. A further improvement might be to leave the magazine well in the receiver solid instead of milling it out. This would permit of more wood in the stock at this place. An entirely new trigger guard, without any floor plate and with a finger rest similar to the Swiss, would also be an improvement. As a matter of interest there are published herewith photographs illustrating the outstanding rifles of some of the other teams in these matches.

In personnel, a team should be picked following the meet at Camp Perry, and these men should practice with a .22 similar in every respect to the rifle which is to be shot in the next year's match. This winter practice, especially if the set triggers are interchangeable with the .30-caliber rifles, will give the men valuable practice and preparation for the final tryout prior to the selection of the seven men to go across. Unfortunately the crowded schedule at Camp Perry this year made such a plan unfeasible for the 1929 team.

A comparatively large staff is also required. The members of the staff should be selected well ahead of time, so that the innumerable details of procuring the equipment can be completed long before the date of departure. Also the staff could then have ample time to arrange about transportation, passports and other matters. In addition to a team captain and coach, two additional coaches are necessary to cover three targets during the match, as it is possible—and it has been done before—that each team will be assigned three targets. It would

also be advisable to send one member of the staff across at least two weeks ahead of time to arrange for the landing of the ammunition, to engage suitable and economical quarters, and to familiarize himself with all the innumerable details which are necessary, before the



team arrives. Heretofore the lack of some such advance agent has been the cause of additional expense and worry to the team upon its arrival. It has been the history of every team to encounter these same difficulties, regardless of the correspondence and arrangements made with foreign rifle associations, or commercial agents.

Following is an account of the matches, translated from the Swiss paper, *Illustrierter Schiess-Sport*, of July 31:

#### THE RIFLE MATCH

"The struggle for victory in marksmanship was more stubborn on this occasion than ever before. Up to the very last hours it was uncertain to which country this would fall, or, in other words, the contest became closer and closer. Individual competition for world championships was also undecided up to the last hours.

"On Tuesday morning at 9 o'clock, when the twenty-nine targets were set up, the majority of the rifle ranges were occupied and immediately a lively rattle of firing began. In the farthest corner of the rifle range, hence at targets 28 and 29, the Swiss marksmen were found. Next to them were the Czechoslovakians, and two targets further up their most dangerous adversaries, the Swedes. Targets 6 and 7 were taken by the Dutch, and then came the French with targets 8 and 9. Belgium, which was close by with targets 10 and 11, had on her right the second possible victor, America. Then came Finland, whose team had returned from Paris the day before; and next to Finland, Spain with her new weapons, which, however, did not prove satisfactory, the chief reason for this being unsuitable ammunition. To Italy and Norway targets 18 and 19 were, respectively, apportioned. Targets 1, 2, 3, 4, 5 and 20, 21 and 22 were reserved for the Army Rifle Match.

"We will now proceed with the contest, the most heated which has ever taken place. The Swiss began their first string (Passe) very successfully in prone position with 97 points made by last year's world champion. Lienhard also made his 95 points. In the second string the result was the same. Hart-

mann, on the contrary, made only 93 points in his string. Equal skill was shown by the Swedes, 97, 92, 95, 98 and 94 points being made in their first string. The Americans began with one string only in prone position with 92 points, passing immediately to kneeling and standing positions. This was done for technical reasons. Norway and Czechoslovakia, both of which countries had started with the prone position, were not far behind the first-named countries. If this match was followed with interest, it could not fail to be acknowledged that we had here a really close contest, which was indeed a fact. Throughout the entire first day there was nothing else to do but to consider which country had made the most points. Finland also showed a uniform skill in standing position, which aroused misgivings in the minds of some. Italy, which was only three targets over, appeared to be pursued by ill luck. There were no bad shots, but also no depth shots (Tiefschüsse), and therefore there was nothing to be feared from this side, as also not from France, Spain, Holland and Belgium. On the first day, Norway attained about the same results as Czechoslovakia. Interest was therefore centered in the three principal competitors, Switzerland, America and Sweden, all three of which continued to maintain their skill, except that the Swiss, in kneeling position, had already had a few poor strings.

"The struggle for single points went on and on, and under these circumstances it was obvious that a decision would not be reached until the following day. Wednesday morning found the Americans first on the field; but they had to make up a few strings from the day before; the Swedes were also somewhat behind. Switzerland held first place at 9 o'clock in the morning, but there were still a few strings to be made prone and kneeling. It became constantly more difficult to follow the course of events, and added to this the number of points had to be compared. Toward noon the Swedes and Americans were pretty equal and a close final contest could be reckoned upon. Switzerland, which had done excellently standing, seemed to have gained the

advantage, but victory was not yet certain, owing to the fact that the Americans, in kneeling position, would evidently have further gains to record. In the afternoon there was hardly a string in which they made less than 90 points.

"In these hours, however, the two Swedes—Olle Eriksson and Maurice Eriksson—gave a masterly performance. It was impossible to judge which of the three countries would be victorious even after 3 o'clock. We therefore rather looked to Hartmann to win the world championship, since toward 4 o'clock he made 92 and 95 points in his two last strings in standing position, this making a total of 1,091 points, but he was not able to enjoy first place for long. After a few minutes he was beaten by Olle Eriksson (Sweden), the present world champion, by two points. Maurice Eriksson had finished his series with 1,086. Thus only Switzerland was left to contest the championship. Though its citizen Hartmann would still have had to have 85 and 86 points in the last two strings, which in the majority of cases were shot in succession. With one more point this marksman, who appeared to be in particularly good form, was certain of the championship. Based on the latest scores of Olle Eriksson two more points were therefore required. Could he accomplish this? That was the great question, which the marksman himself could not answer, and still less the many spectators, who caused him more and more embarrassment. He again made 86 points in the last string, and must therefore acknowledge himself defeated. His total score of 1,091 points is nevertheless praiseworthy and deserves full recognition.

"In the case of the exciting scores of the two best marksmen the decision had also fallen between Switzerland, America and Sweden. Switzerland was again victorious with the record score of 5,391 points, thus 5 points more than at St. Gallen. Second place was held by Sweden with 5,339 points, and third by America with the same number. On rechecking the latter had to register four lost points."



Lyman ramp on remodeled Krag

## The Lyman Front Sight Ramp

By CLYDE BAKER

HAD this ramp been on the market eight months ago, or had I known that it was coming, I should probably have devoted less space to the subject of homemade sight ramps than I gave to it in "Modern Gunsmithing," for Lyman's new ramp not only meets every requirement of a thoroughly modern front-sight base for sporting rifles, but is, in addition, offered at about what the amateur gunsmith would have to pay a machine shop for a milled blank from which

to make his ramp. Like everything else bearing the Lyman trade-mark, this ramp is good, for the folks at Middlefield don't know how to make any other kind of stuff.

Heretofore the only ready-made sight ramp available cost \$10 and fell far short of its purpose in providing a non-glimmering, mirage-free plane leading up to the sight itself. It required a gunsmith to attach it properly, and refinishing of the barrel was necessary afterward. Moreover, it was en-



The new Lyman ramp

tirely too low to be of any real use, necessitating a rather high front sight which one always feels is in danger of becoming bent or broken.

The new Lyman ramp eliminates this objection. It stands about  $\frac{3}{8}$  inch above the center of the bore, so that the bead is only about  $\frac{1}{8}$  inch above the top surface of ramp. It uses the No. 26 front sight with gold or ivory bead in three sizes, and this sight can be had in different heights for various rifles.

The over-all length of the ramp is  $2 \frac{21}{32}$  inches, an excellent length for a 22- or 24-inch barrel, although some will prefer a slightly longer ramp, particularly on longer barrels. The band portion, which encircles

(Continued on page 20)



# Telescope Sights

By CHAS. ASKINS

WITH the editor's permission I am going to add my mite—a rather abbreviated mite—to the telescopic-sight discussion. My own position will be found somewhere between that of Captain Curtis and Colonel Whelen.

In the first place the captain is nearly right when he says set the telescope sight for hunting and then let it alone, provided we do as the captain has done—*shoot just one kind of cartridge of one make*. The instant we vary the kind of cartridge or the load, trouble will ensue for our sight-setting. There is no such thing as shooting two different makes of cartridges, no matter if of the same load, same weight of bullet, same velocity, with the same sight-setting. If we like, say, the Western Cartridge Co.'s 180-grain bullet at 2,700 feet, and we are willing to ignore every other cartridge made, no matter who makes it, the telescope sight can be set for windage and elevation and never changed. Conditions may vary the center of impact a little, and will vary the center of impact a little, but not enough to cause game to be missed.

Now for the other side of the story. I once tried out a Winchester .30-30, Model 55, shooting it from a secure rest. Every make and every variety of ammunition was tried. All were good cartridges, and with any make or any load the gun would shoot into a 3-inch circle or smaller at 100 yards. Yet, when one make of ammunition or one load was shot after another without change of sight, the gun shot from the top to the bottom of the small-bore target with a lot of difference in windage. It is no use—you can not get away from that; and no two loads ever did shoot together. I once shot the .30-06 Remington with Remington 220-grain, Remington Bronzpoint 150-grain, Western 180-grain, U. S. 180-grain, Government 172-grain, and a hand-load containing 180 grains, at 100 yards, and the vertical distance between the highest shot and the lowest shot was 8 inches; the horizontal distance between outlying shots was 6 inches. No group of ten shots for a given make of ammunition exceeded 2½ inches. I would hate to handicap a rifle like that by using a fixed sight.

If a man has a readily adjustable scope—one that moves by clicks to the inch or the half inch—the matter of changing ammunition is very simple. After firing one shot to foul the gun or to take the oil out of it, the very first shot will give us a basis for striking the 10-ring with the second shot. This is so positive that I could fire one well-held shot, and calculating from it, could set my sight and go on a hunting trip with the positive assurance that my sight was right. Of course a man would not be satisfied with that

but would try his sight to be sure of his adjustment. I saw my son sight-in a rifle with a new make of ammunition recently. The first two shots went into the 8-ring of the small-bore target at 3 o'clock, well out on the edge of the ring, but a quarter would have covered the two. He set his sight by those two shots and the next one hit the 9-ring just under the 10, and the fourth hit the 10-ring just above the 9, both shots striking an inch ring. It is obvious that he could have done just as well with two shots, since only one sight change was made. Now could this have been done with a nonadjustable telescopic sight? If so, that is the only kind needed. Here is my position: one load, one make, never anything else, and a fixed telescope sight is fine; but any two loads whatever, in any rifle whatever, demand a sight, adjustable and finely adjustable, for both windage and elevation.

The Noske scope and mount have been mentioned. The Noske is not a nonadjustable sight. I had one mounted on a 276 rifle, in which I used two bullets—a 175-grain at 2,800 feet and a 160-grain at 2,600 feet. Naturally the two bullets did not shoot together, but they happened to have the same windage. The Noske elevation is secured in the reticule by turning a screw on the top. I took a fine file and marked the bed of this screw. One mark gave me the precise elevation for one bullet and the second mark for the other bullet, and I had no trouble in changing from one to the other. But the windage can not be changed the same way because between tension on screws and spring of metal, there is no surety of adjustment, and it becomes a matter of many trials and errors. One of these cartridges was for deer shooting and the other for the largest game, and it was necessary to change sometimes.

I do not quite agree with Captain Curtis as to the advisability of setting the scope high, and resting the chin instead of the cheek on the comb. I was cured of that a long time ago. Once upon a time I had a Colt double rifle, caliber .45-70. The stock had a 3½-inch drop at butt and 2 at comb, measured from level of the rib, the same as a shotgun. Measured from the line of sights the drop was much greater. Only my chin could touch that stock. A half dozen shots would raise a lump on a man's chin, and only the devil could have taken that wallop on the chin without developing flinching. The man who rests his chin on a hard kicking rifle is going to learn just what I learned, and one lesson will last him.

Because of a desire to set my scope as low as it is possible to set it, a circular gash was cut into the Springfield bolt of the

.276, so that the bolt handle could rise above the scope tube. The bolt handle was cut halfway through, which still left it amply strong. The scope was set too low to permit the use of the Lyman 48, though the base of the Lyman was left on and only the vertical slide carrying the peep removed. This could be put back just as readily as the scope could be removed; and, like the scope, went back to one fixed position. On my rifle, Noske scope, it was neither practical nor desirable to have both sights on the gun at the same time. I tried that; and with the Lyman under the scope the field was cut down too much for running shooting. The field was cut away on the left side by the mount and on the top by the scope, which made finding a running mark difficult. In the same way my Belding & Mull scope is set too low to permit the use of their bolt-sleeve peepsight, though in other instances the scope is set high enough to permit the use of both sights at will.

Nor do I agree with Captain Curtis in his indifference as to whether or not the field is wide. Other things being equal, no scope ever had too wide a field. It is true that good running shooting can be done with a 30-foot field, particularly in distant shooting. But if the field is narrower than that, at close range the object aimed at will appear to jump toward the sights as the gun swings on, and nothing can be done with that sight. The stationary marks, of course, will be all right. Nevertheless a 40-foot field is better than a 30-foot one, and a 50-foot field would be better than either. The wide field marks the difference between the modern scope and the old-timer; and the difference can not be too marked.

I quite agree with Captain Curtis about the advisability of using the lightest mount and the lightest glass possible to secure where the rifle is already of full weight. That is why the Remington Express rifle and the Belding & Mull scope make such a perfect outfit. The rifle as it stands is light for the .30-06 cartridge, but in combination with the scope the weight is as nearly right as it is possible to get it. If the scope were placed on a 9-pound Springfield it would be another story.

## COLONEL MYERS APPOINTED EXECUTIVE OFFICER OF NATIONAL MATCHES FOR 1929

COL. HU B. MYERS, Executive Officer of this year's National Matches, has been appointed Executive Officer of next year's Matches. This is very good news to all in any way connected with this great annual shooting event.



## Double Express Rifles—Another Viewpoint

By COUNT V. DA GAMA

ANYONE who has lived for almost two years the lonely life of the wilderness will understand the pleasure I experienced when, upon my way from Central Africa to the coast, I got some English newspapers and other publications from an American missionary I met on the river. Among these was a copy of the February issue of *THE AMERICAN RIFLEMAN*.

I read with great interest the worthy article by Mr. W. M. Garlington re "Elephant Rifles." With a sincerity much to be appreciated, Mr. Garlington admits that he knows those rifles only from testing them on the shooting grounds. The memory of many hundred dollars wasted on useless equipment through wrong advice, and of having met in Central Africa an American party carrying about ten times more equipment than necessary, while at the same time lacking indispensable items, prompts me to send you some information in the hope that it may help future adherents to the greatest of all sports: the pursuit of wild and dangerous animals in their almost inaccessible haunts.

When I left civilization two and a half years ago on my last trip my personal battery consisted of:

- One .500/465 Nitro Express double rifle by Messrs. Holland and Holland;
- One .355 magazine rifle, Mannlicher-Schönauer;
- One .423 magazine rifle by Mauser;
- One .318 magazine rifle by Mauser with detachable Carl Zeiss telescope;
- One .22 Browning repeating rifle using the American .22 long rifle Lesmok ammunition;

One double-barrel ejector 12-bore hunting gun;

One Browning automatic 12-bore shotgun.

I soon rid myself of most of this cumbersome and useless arsenal, keeping only the Express and the Mauser .318.

When I left London I was the firmest believer in big-bore rifles that ever lived. The thousands and thousands of pounds of striking energy emphasized by the English catalogues had made a deep impression upon me. The assurance given by the manufacturers that "any elephant wherever hit would at least be knocked down on the spot" or "disabled, permitting a second shot," made me feel at that time that such rifles did constitute the "life-insurance policy" mentioned by Mr. Garlington.

My faith in them began to shake one afternoon on the K. Ouyou River, in French Equatorial Africa. I left my camp around 4 p. m. looking for buffalo, very plentiful in that section. Twenty minutes later the native guide pointed out to me a medium-size buffalo, feeding sidewise in the middle of a small prairie about 100 yards wide. I fired, aiming at the heart; and through misplacement of my second finger both barrels went off at the same time. The buffalo made for the bush without giving any signs whatsoever of having been hit. I was really puzzled because at 100 yards never before had I missed the heart of a buffalo. We went to the place where the buffalo had been feeding. No traces of blood were visible. As we were leaving on the next morning I needed meat for my men and felt very much

annoyed about my bad shooting. I then heard the characteristic death call of the dying buffalo. I went into the bush, and sure enough there was the animal lying dead. My two bullets had entered about one-half inch below the heart, and within two inches one from the other. They were of the expanding type and had gone through the whole body, locating under the skin on the opposite side. They had pierced an artery, thus ensuring death.

Now, if one .465 bullet gives about 5,000 pounds' shock, according to logic two must give about 10,000. If that shock was what it is generally believed to be—a "blow"—would not the buffalo, weighing 1,200 or 1,300 pounds, have been knocked down?

Upon another occasion, around 5:30 o'clock, I gave a side shot at a big elephant. He went 20 or 30 yards and fell astride, his back against very thick bush. I soon was there and fired the other barrel at his head. Everybody who has hunted elephants knows that for some reason or other it is quite hard to get the brain of a lying elephant unless you face his back. In this particular case I could not get there on account of the extreme thickness of the patch of jungle against which he was lying. Now at the distance of perhaps five yards I pumped nine more bullets into his head, which did not seem to bother him much. While doing so, my tracker, using his cutlass, opened the thicket a little; and then from behind I killed the beast with the twelfth bullet. I remember perfectly the number of bullets I fired because my belt holds ten rounds, and being



far from camp I was detained for a full hour by a herd of elephants feeding on the path and which refused to budge, no matter how much noise we made—and I had no bullets left to tackle them with or drive them off.

(The tusks of this particular elephant registered at the nearest post scaled 95 and 108 pounds.)

Striking energy is generally interpreted as "blow," when it is nothing else but "a pressure applied to a surface represented by the cross section of the bullet"—in other words, a function of penetration.

Now I beg to refer to Mr. Garlington's article and answer some of his statements.

I hesitate to question the fact that the ammunition he used was loaded with cordite; but for quite some time this powder has not been used, but has been superseded by "M. D. T.," a powder of similar stringy appearance. I have at hand a letter from Messrs. Holland to that effect. The cordite was a perfect powder, but extremely sensitive to changes of temperature, thus causing a rifle to fire high or across, or low, on occasion. The M. D. T. is considerably more stable, and is used instead of cordite by Messrs. Nobel & Co., the London cartridge manufacturers.

In due fairness to the big bores I must say that a little practice does away entirely with the inconvenience due to recoil or concussion. In order to get this practice I fired many rounds before leaving for Africa. For instance, one morning I remember having fired over 50 rounds in less than two hours at the shooting grounds of Holland, and never felt them. In Africa many times I have fired eight and ten shots in succession, and this did not inconvenience me in the slightest.

Coming back again to Mr. Garlington's article, I must say in due justice to my former friends—the big-bore rifles—that the British manufacturers supply them with the exact sights specified by the customer. If Mr. Garlington found his sights coarse this is only because the original purchaser ordered them that way.

But where the English gun-makers make error is in adjusting the standard rear sight for 100 yards. At this distance the shooting will be correct, but at 25 or 40 yards it will be a good inch too high; and in thick bush that inch may mean a lot. Happily I had in my tool cases special files, and I adjusted the 100-yard standard sight of both rifles for 25 yards; the 200 to be correct at 75, and the 300 for 150. My new rifles will be so sighted, as I expect to shoot both in jungle and plain.

If I had to answer this question, Which are the advantages of the big double bores over small-bores when used against big game? my reply would be: *None*. But here are their inconveniences: The better expresses made in London by firms like Holland, Rigby, Westley Richards, Purdey, Jefferys, etc., cost between 130 and 145 pounds sterling (\$600 to \$700). A small-bore magazine rifle by the same makers costs only £30 to £40 (\$125 to \$180). Although if we consider the total cost of an

exploring or hunting expedition the difference in price is nominal, the fact remains that it exists.

Weight is also a drawback. One should always carry one's own rifle, and you may train yourself, as I did, to carry for hours an 11-pound rifle, and not notice the weight. But at a given moment your muscles will not react with the necessary rapidity, and the result will be a poor shot.

Besides this, you can not expect to hit correctly a running animal with a heavy rifle. Only once out of many attempts did I succeed in getting the brain of a running elephant with the Holland, although I have done this quite a few times since deciding to use only the .318, weighing 8 pounds.

And now we come to what I consider the greatest inconvenience and danger of the big bores. This drawback is of a psychological nature. These guns have the worst possible influence upon the hunter, especially if he be a novice, as they make him think he has in his hands a weapon which will "knock down" or "disable" a dangerous animal even if the brain or heart are not exactly hit. Those famous thousands of pounds at the critical moment will make him shoot too quickly—take a "chance shot"—the thing to avoid at all cost.

Now be it kept in mind that hundreds upon hundreds of hunters have been killed by big game. The number of persons killed by unprovoked animals is certainly negligible. The number killed by animals who got a first shot correctly placed is naught. Hunters are killed or mauled because their first bullet was misplaced, through lack of knowledge of the art of shooting, lack of nerve control impairing their aim, or haste. Big bores are apt to make you take the chance shot. I have done it and have been charged furiously by maddened elephants. Had I waited a few seconds more before firing I would have easily bagged those elephants, as I have bagged many others, with one shot and without trouble.

In order to appreciate this "psychological" inconvenience, particularly in the thick jungle, some information is necessary regarding the ways in which the big elephants are hunted there.

As everyone knows, under the tropics the sun is up at 6 a. m. and down at 6 p. m. When I was camping near a village all the men would go out looking for tracks of the previous night as soon as they could see their way around. Generally at 6:30 or 7 I was dressed, had had my breakfast and was ready for action. Presently some of the men would come back with a little stick giving the diameter of the impressions of the front feet and report where the tracks had been found, offering whatever additional information they thought of use. In certain parts of Central Africa which I crossed on my last trip solitary bull elephants were so numerous that I have had by 8 a. m. as many as ten and twelve different tracks reported. After a brief consultation with my own trackers, who for many months

were two pygmies, a track would be chosen and we would be on our way at once.

The psychological inconvenience above mentioned particularly applies to novices hunting in the thick jungle, where after hours of difficult tracking in the underbush you find yourself within only a few yards of the feeding elephant. The noise and rumbling of his bowels and his mouth, and the flapping of his ears, make a most heavy demand upon your nervous control, and you have sometimes to remain many minutes in close proximity to the animal, waiting for a better view of his head which will permit a good brain shot. At that particular moment the eagerness to fire becomes paramount, and no matter how experienced you are it is difficult to restrain yourself and wait a few more seconds, which seem like long hours. At that instant the thought of the 1,000 pounds of energy claimed by the British gun-maker makes one feel inclined to take a chance shot, which nine times out of ten will result in the animal charging you or running away. I have found that with a very small rifle the necessity of placing correctly the shot appears more emphatic and restrains the hunter from the dangerous chance shot. There is no doubt at all that the most powerful express rifle will have but very little influence upon an animal of the size of the big Nile elephant, unless the beast be hit in a vital spot; and I recall an instance in which I placed three 1,465 bullets in an elephant's head at very close quarters, and after I had chased him in the thicket he went off and I never found him, although he had lost gallons of blood.

Now, here are the advantages of small-bore (.265, .275, .318) magazine rifles firing a blunt, solid bullet (pointed bullets are to be avoided as they deflect on heavy bones or skull):

Cheapness.

Light weight (6½ to 7½ pounds).

Better shooting with one barrel than with two, with both eyes open, which is indispensable.

Possibility of firing a second or third shot and still have three or four cartridges left.

Practice will enable one to fire the second shot almost as quickly as with an Express, and the others much more quickly.

Little noise—most useful when among herds.

Little recoil.

The fact that you will never dare take a "chance shot."

These rifles have, however, the inconvenience of not permitting as easy an inspection of the barrel when close to game as an Express will do. This precaution is necessary in thick bush to blow out dirt or mud that might have entered the muzzle.

I expect to equip shortly an expedition to remain several years in the wilderness, and during that time I intend to hunt elephants extensively, for which I have special Government permits. My personal rifles will consist simply of three identical small-bore

(Continued on page 26)



# Pennsylvania Handmade Rifles

By GILBERT IRWIN

MUCH has been written about Kentucky rifles, Tennessee rifles and the weapons of pioneers and old-time marksmen and hunters of all of the original States and sections of our country, but these weapons are all very much alike, no matter from which State or collection they may have come. Probably just as good a term to cover all of these rifles would be the "Eastern Mountain Rifle," or the "Appalachian Muzzle-Loader," for, except for museums and private collections, even today it is in these mountains that the old-time handmade rifles are still to be found in most every family which traces its lineage back to the pioneers or early settlers.

This is true in all Eastern mountain States, but the old-time rifles and other curious firearms still treasured in many families in the Pennsylvania mountains have been a source of information and interest to the writer for several years past, during which we have spent much time in these still, wild regions. While Pennsylvania is more frequently thought of in connection with iron and steel, coal and coke, and numerous other products of mine and factory which the whole country must have some of the Pennsylvania mountain counties are still more than 80 per cent forest; that is, cut-over woodlands which have again grown a healthy tree crop. There are more than a million acres of State-owned forest and the Allegheny National Forest is about half that area.

Firearms of all kinds are most plentiful where forests abound; and in most every mountain dwelling in the Keystone State you will find quite a complete arsenal for game-getting, which includes shooting irons both old and new. After the timber-butchers had given the Keystone mountains a close shave and haircut forty or fifty years ago game dwindled; but since State and National forestry has been functioning the past thirty years or so the planted furred, finned and feathered species have prospered; and the fact that Pennsylvania is now the third State in deer yield—Michigan and Minnesota only excelling her—has resulted in the increasing use of weapons of all kinds in the bear and deer season. And the ancient muzzle-loaders get the bucks and old clubfoot along with the modern high-power guns.

In the office of the *Potter County Journal*, the editor, M. J. Colford, a well-seasoned member of Keystone premier big-game wilds, displays the ancient rifle, with powder horn, with which his progenitor, John Jordon, killed the last of the Black Forest native elk herd forty years ago. Near Cross Fork, in the same county, 'Squire Clayton Dingman shows you the ancient flintlock which his great-grandfather carried with the Continentals when Indian and Red Coat hunting was popular.

Old-time Pennsylvania mountain firearms quite generally date back to the Revolution.

When the war was over the western trek began, and the veterans carried their war weapons with them on their quest into the mountains. Many of these men turned professional hunters; but guns were also necessary for game-getting on the wilderness hike and for protection against fierce animals and the savages.

Large quantities of the small arms, as well as cannon, used by the patriots were made in the Pennsylvania mountains, where iron furnaces were early developed, using the low-grade native ore. Wherever an old-time iron furnace was operated crude forges were also located, and gunmaking was carried on along with the other primitive iron-working trades. In time gunmaking became a specialty, owing



to the demand for firearms in the mountain wilderness. The old flintlocks gradually were remodeled into the old pivot rifles and smoothbores, specimens of which are still to be found in practically all Pennsylvania mountain counties.

After the War of 1812, for which Keystone primitive iron industries furnished much ordnance, hand gunmaking became quite an art. When the Civil War opened whole regiments from the Pennsylvania mountains were mustered into service, equipped with their handmade squirrel guns and other nondescript game-getters.

An instance of this was the famous Bucktail Brigade, recruited in the wilds of Kane, Elk, Cameron and Clinton counties. Dressed in woods regalia, with buckskin trousers and jackets and swaying bucktails dangling from headgear, these men floated down the Susquehanna River from Driftwood on four barges; and when they reached civilization at Harrisburg, the State capital, they gave the natives a scare by their queer attire, for a time those rough woodmen with long

squirrel rifles being mistaken for raiders from Dixie.

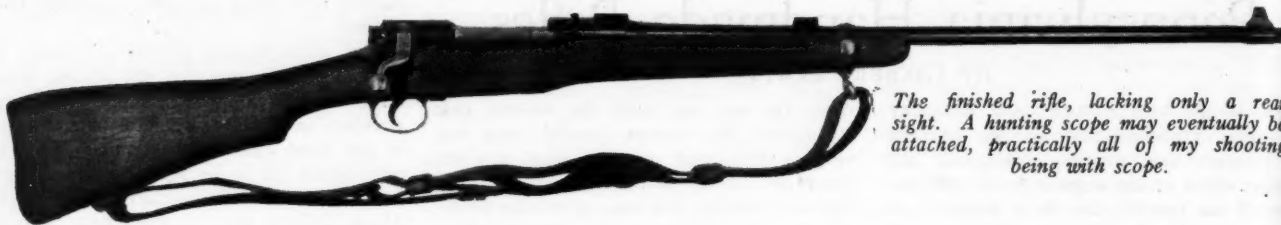
The accompanying picture is typical of the old-time hunters and the ancient handmade rifles which are to be found today most anywhere in the Pennsylvania mountains—guns of the same class as the famous Kentucky rifles which are to be found in any Eastern mountain State. The picture was posed by Abram Clifford, aged 90, living near Ligonier, Pa., and present-day representative of a Revolutionary family. His forebears were members of the Forbes Expedition, which captured Fort Duquesne in 1758, after the Braddock disaster.

When the Forbes army came over the mountains they established a fort at Ligonier, and from this point, 50 miles east of Pittsburgh, conducted the campaigns which drove the French from the upper Ohio Valley. After the army returned east a settlement sprung up around the fort, which was garrisoned by the English and Colonials until after the Revolution. Charles and James Clifford, soldiers with the Forbes army, settled here, and the former was captured by the Indians and taken to Canada. James Clifford, known as Indian Jim, became a famous Indian fighter, and according to tradition made many killings. He hunted savages, accompanied by his two dogs, Whig and Tory, both of which are credited with the skill of pointing Indians.

The two guns shown with Mr. Clifford are similar to half a dozen others which he treasures, and which were either changed from flintlocks by members of his family or are Clifford handmade guns, for the family from pioneer days has always contained a gunsmith. Most notable of these was Billy Clifford, who plied his trade as watchmaker, silversmith and gunmaker for more than fifty years in Ligonier Valley, living in the same house now occupied by Abram Clifford, and which is more than 150 years old.

Mr. Clifford stands six feet four, and in his left hand grasps one of the handmade rifles fashioned by his grandfather, Billy Clifford. Like others he owns, this weapon displays the old gunmaker's art. It has a 50-inch barrel, mottled maple stock with patch-ball cavity hinged with silver covering and fittings, and from butt piece of German silver to the full-length stock extending to the muzzle the gun is inlaid with silver and gold ornaments—ancient coins, crescents, stars, miniature coats of arms, and what not.

The lengthy gun which Mr. Clifford displays in his right hand has a peculiar history. It is of English make and is a smooth-bore of about 20-gauge. According to best information the gun was brought to this country about 1830. After the great Johnstown flood it was found in the ruins by a member of the Clifford family, and when cleaned up was found to be in shooting condition. A 6-foot-4 shotgun is somewhat of a novelty, and even today Mr. Clifford loads her up and takes a crack at rabbits, squirrels, grouse and ringnecks, which are numerous on his mountain farm.



*The finished rifle, lacking only a rear sight. A hunting scope may eventually be attached, practically all of my shooting being with scope.*

## A Model 1917 Enfield Sporter

By L. J. HATHAWAY

**T**HIS is being written at the instigation of my friends, Colonel Whelen and Captain Wotkyns. Both have seen the rifle, and have been generous enough to praise it and to urge that I write an account of it, with photographs, for publication in this magazine. Captain Brooke, of the D. C. M. office, also expressed the hope that I would publish something on the remodeled Enfield.

To begin at the beginning, the responsibility for the job can, in the last analysis, be laid at the door of the two first-mentioned gentlemen. During a two-months' stay in Washington last winter Captain Wotkyns was good enough to spend some of his odd time with me; and the talks we had on the subject of firearms were to me most interesting. On more than one occasion during these chats the Captain praised very highly the new English Enfield action, as found in our Model 1917 Service rifle; and, in slightly modified form, in the Remington Model 30 Express. I became very much interested in this action and brought the matter up some time later during one of my visits with Colonel Whelen; at which the Colonel said that he had one of the Model 1917 rifles for which he had no use, and urged that I take it and do with it whatever I might wish. Wotkyns had stimulated in me a desire to possess one of these Model 1917 rifles, to experiment with if for nothing else; and when one came into my possession in the form of a gift from a friend, it was rather highly prized.

We have heard our old friend the Russian rifle proclaimed as being the ugliest rifle ever made by man; but if it is any uglier than the as-issued Model 1917 Enfield arm I can not see it, for to me that Enfield stands in a class by itself for sheer, what I shall call "hopeless," ugliness. Hopeless, because, after you have done everything you can think of to make a rifle out of the brute—cut off the fore end; trimmed down the front sight stud; built up the comb of

the stock, if you will, and done all the other things that appeal to your fancy—the job still remains hideously ugly because of those clumsy, awkward rear sight guards, forged integral with the receiver bridge.

I dreamed over that gun and dreamed over it. I visualized the rifle cut down to a sporter, and tried to convince myself that in this form the rear sight apparatus would not be so objectionable. I thought of the advantages of using the rear sight just as it was—so well protected against a fall or rough handling. But in the end I always found myself wishing that that rear sight were in h—! anywhere, except on the receiver bridge of my rifle. If that sight just hadn't been put on there in the first place what a wonderful opportunity the Model '17 would offer for remodeling. But there the thing was; and it appeared to grow bigger every time I looked at it.

I thought of taking the gun to a machine shop and having the sight guards milled off and the receiver bridge shaped up neatly; but such jobs run into money. Also I could have discarded the Enfield and bought a 30 Express; but this, too, costs a little money. Moreover, I would lose the joy of creating something, one of the greatest joys in life. So I determined to battle on with the Enfield.

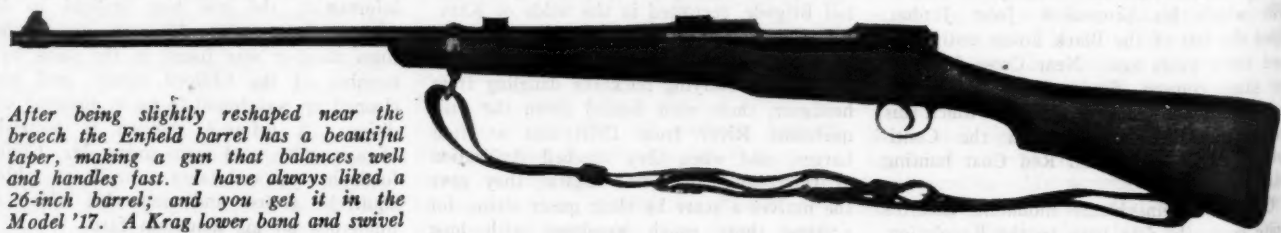
In handling the rifle it was found that the bolt worked rather stiffly in places; smoothing it up removed most of the bluing—and the bright steel improved the appearance of the gun. So the bolt was polished all over. Polishing the bolt handle brought out the clumsy ugly lines of the handle toward the outer end. The bolt handle on this particular rifle was made straight, without any taper toward the ball. Just before it reached the ball a groove was turned down into the handle to form a fillet between the handle and the ball. With soft steel it would not have been a difficult job to file a neat taper in the bolt

handle; but I dreaded that tough nickel-steel. Finally, however, I could not stand it any longer and made the plunge. The nickel-steel was tough, all right; no denying that; but eventually the handle was tapered, and polished, and looked very well.

And then, in an ill-considered hour, I removed the loose parts of the rear sight; took the hacksaw down from its nail on the attic wall, and gingerly "felt out" the metal in those sight guards. The stuff was tough, and oh, so hard! I dreaded the idea of trying to cut it with an ordinary hacksaw; but also I thought what good material nickel-steel is to have between your face and the powder charge. In the end I devised a method of bracing the gun while holding it in my lap (I did not have a vise) and went after that rear sight monstrosity in grim earnest.

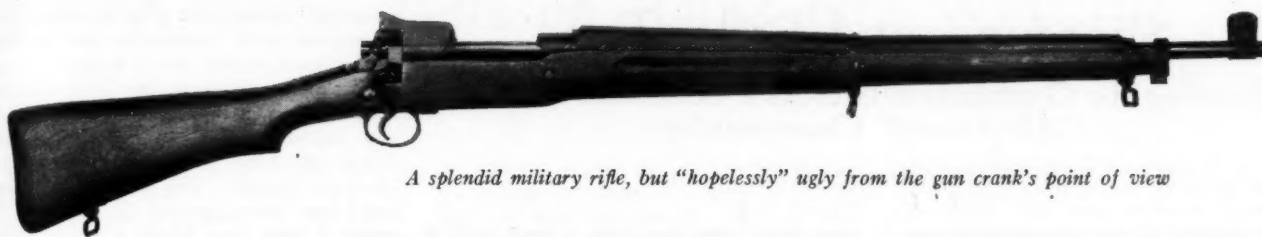
The first four or five saw blades quit cold after not more than a dozen strokes apiece—I doubt if all of them stood that many—and the right-hand guard was little more than scratched. This was interesting. It looked as if the price of that Remington 30 Express were going to be paid in saw blades. Of course this would not do, and I did some studying. The result was that I decided to use some kind of lubricant on the saw blade. Lard oil at once suggested itself, and a bottle of this was dug out from a corner somewhere. I also decided to take greater care in handling the saw, to make sure that it did not bind sideways in the cut, to wear off the sides of the teeth; and also that it was raised entirely clear of the work on the back stroke. Every skilled mechanic, in sawing or filing, takes all weight and pressure off of the saw or file on the back stroke, but usually allows the tools to carry their own weight. But from this point on, in working on the Enfield, the saw on the return stroke was raised entirely free of contact with the work.

These expedients greatly lengthened the



*After being slightly reshaped near the breech the Enfield barrel has a beautiful taper, making a gun that balances well and handles fast. I have always liked a 26-inch barrel; and you get it in the Model '17. A Krag lower band and swivel were used.*





*A splendid military rifle, but "hopelessly" ugly from the gun crank's point of view*

life of the saw blades; and blade No. 16 severed the last bit of steel which held guard No. 2 to the receiver. It was a triumphant moment; but the triumph was rather short lived. I had imagined that once the sight guards were out of the way it would not be so very difficult to clean up the receiver bridge with a file. But when a file was tried on the raw edges left by the saw, it would hardly take hold at all. It was plain that I would spend all my spare time for weeks to come in filing up that receiver bridge the way I wished it. So I finally went to a friendly machine shop and secured the use of an emery wheel for a little while. Twenty minutes later I walked out of that shop with the receiver bridge almost down to finish dimensions, and reasonably true all over. The thought occurred that it might have paid to use that emery wheel at the start, instead of the saw.

The remainder of the work was done with an 8-inch flat mill file and an 8-inch half round, with the exception of removing the clip slots at the forward end of the receiver bridge, the metal here being cut away with the hacksaw, after which it was smoothed up with the half-round file. I never expected to use this rifle as a clip loader, and eliminating the clip feature removes just that much unnecessary weight, and to my mind makes a neater-looking receiver on the finished gun.

Having gotten the receiver bridge shaped up, the remainder of the receiver looked rather crude. Due to the heavy machining cuts taken in the rush of war-time production, lines and surfaces were not always true; and the receiver as a consequence offended a true eye. Therefore I ended by going over the whole thing with the file, down to the smallest detail; and when, finally, the job was actually finished and ready for bluing, I must say that I felt well repaid for the labor.

With the worst of the whole job behind me I cast about for new worlds to conquer, and spied that awful front sight stud. I visioned a few more ruined saw blades, but figured that the stud, being small, could not put up a very long fight. As it turned out this sight stud proved to be made of soft carbon steel, and it cut without the slightest difficulty. First of all the two guard wings were removed, by holding

the saw blade against their inner surfaces, and cutting straight down toward the barrel. Then metal was removed from the front and rear surfaces, to square these up and make a lighter and neater-looking stud. This made a fairly good job; but with the guard wings removed that sight blade in its dovetail notch atop the stud looked like a sore thumb, and it was finally decided to slot the stud lengthwise and use a standard blade sight. Therefore the top of the stud was filed down to remove the dovetail.

The Enfield was beginning to look like a rifle now; and, having spent a good many very hard, tedious hours on it, and also



*What you are up against in the Model 1917 receiver bridge. The bolt handle of this particular rifle requires no reshaping*

because it was the gift of a friend, I decided to do the thing right and get a real finish put on it. Not being myself equipped to do a first-class bluing job, I sent the rifle up to the Niedner people, and told them to true up the contour of the barrel (it had some rough and irregular-shaped spots on the outside); slot the front sight stud for a standard blade; fit scope blocks, and blue the whole thing, first polishing out the file marks on a buffer. Also I asked that while they were milling the slot in the front sight stud they take a milling cut on either side of the stud to lighten it still more.



*The finished receiver on the author's rifle*

The Niedner people did a beautiful job all around; and so, at last, I have in the Enfield a real rifle. The stock is not all that it might be despite the fact that I have worked it over a bit in an effort to remove some of the ungainly lines. I may eventually put on a Belding & Mull Sporter stock (I have not the time to make a new stock myself), or I may keep the present stock to identify the gun. But, barring this Model '17 stock—which, by the way, is not as uncomfortable as it looks—it is a truly beautiful arm. The barrel, of course, is not rifled to regular .30-06 standards, the British system having been employed; but I have been told that these rifles show fine accuracy at that, with standard .30-06 ammunition. And being a reloader, I can probably fit a load to the gun if necessary.

Though I have as yet had no actual experience with it, I think I like this Enfield action a bit better than the Springfield. In the first place there is, of course, the low-hung bolt handle, for low scope mounting. There is also the better safety. Then the action is a neater and cleaner one than the Springfield action, and smoother working. The bolt handle at its base serves as the safety lug, which gives a cleaner bolt and eliminates the channel

in the under side of the receiver bridge, giving a cleaner bridge, with plenty of metal on top for attaching a scope mount, if desired. The receiver hood on the Enfield is about a sixteenth of an inch larger in diameter and an eighth of an inch longer than in the case of the Springfield, and should therefore be stronger, if this is an advantage, the diameters of both bolts being practically the same. Taking advantage of this extra metal in the receiver hood, the locking lugs on the Enfield bolt are wider than are the Springfield lugs. In both rifles the lugs have practically the same depth, as measured on the bolt radius. Other things being equal, it would appear that the Enfield action should be able to withstand appreciably higher pressures than the Springfield action. The Enfield bolt has two gas escape holes in place of the Springfield's one, one hole in the Enfield bolt being a large one. The Enfield should, therefore, be able to take care of a sudden escape of gas from a punctured primer or ruptured cartridge case better than the Springfield.



# Shotgun—and Rifle, Too

## Entering the Combination Gun As a Contender for the "All-Around" Championship

By CAPT. CHARLES L. GILMAN

**H**UNTING, for the average sportsman, is getting so limited and so specialized that he rarely seeks more than one species of game at a time. If he is out for elephants, dodo birds do not interest him, and vice versa. Hence the term "all-around gun" has come to imply a rifle which can, by changing cartridges, be adapted to any furred game, from gophers to grizzlies, or a shotgun reasonably efficient on either wild geese or quail.

But it was not so in the olden days. When "gun" spelled "meat in the pot" rather than "trophy on the wall," the demand for a firearm which could gather in anything which had flesh worth cooking, fur worth peeling, or a scalp worth taking, was mighty insistent. In the muzzle-loading era, even back in the flintlock days of abundant game, the over-and-under combination of shot and rifle barrels was as common as the general poverty of the gun-buying public permitted. This was, in full fact, an "all-around gun." With specialization in sport this type of weapon dropped into obscurity, though its use among men living by the gun in remote regions never wholly lapsed.

Probably the cheapest solution of this problem of the wilderness dweller was achieved by the Hudson's Bay Co. in its Indian trade gun. This was a single-barrel muzzle-loader of about 28-gauge, first with a flint, and later with a percussion, lock. Those I have seen, of the latter type, were made with hammer, trigger and trigger guard of such gigantic proportions that the user could cock and fire his gun without taking off his heavy fur mitten. The Indian owner loaded this gun according to the game he had in mind—with a pinch of powder and a half portion of shot for killing muskrats from the canoe; with a full charge of powder and shot for wildfowl, or with all the powder it would stand and a single ball for deer, moose, bear and caribou. In a sudden pinch, as when rounding a bend and coming upon a feeding moose, let us say, a ball was dropped down the barrel on top of the charge of shot (if gun happened to be so loaded) and the whole dose administered the patient at once.

Such a gun was a short-range weapon; but in the hands of so fine a stalker as the woods Indian it served very well.

The modern descendants of these same Indians show a decided preference for the single-barrel 12-gauge shotgun, which they make into an all-around meat-getter by carrying buckshot or ball loads for big game. One very progressive young Indian, much on the prowl for anything he could get, confided in me that his 12-gauge pump gun was loaded alternately with duckshot and buck-

shot loads! and that, with a duck load in the chamber, he would simply press the release gadget and pump the gun once if he ran onto a deer.

Along with the primitive musket above referred to were more expensive combination guns, belonging to the better-paid servants of the fur trade. One such I handled, as a boy, in the shop of an old-time gunsmith at St. Cloud, Minn. This man said the gun had been left with him for repairs by a Hudson Bay man en route to St. Paul with the annual train of Red River carts. Why it had never been called for may be a romance—or a tragedy. This gun, a percussion-lock muzzle-loader, was a three-barrel or "drilling"—that is, it had double shot barrels of about 12-gauge, with a single rifle barrel between and below the shot tubes. What impressed me at the time was that the trigger guard was of wood, and that the fore end encased the barrels, much as does the fore end of a modern military rifle. My old gunsmith friend explained that this was so that the gun could be fired in extremely cold weather without touching bare flesh to metal. This, as those of warm climates may not know, is quite equivalent to handling red hot iron with naked fingers.

Thus backwoodsmen have never ceased to seek, in some form, a truly all-around gun. Unfortunately the big buying demand has not marched with them and they have been compelled to resort to makeshifts of various kinds, since imported combination guns are far beyond their means.

Today trappers traveling in pairs very generally carry, one a .22-caliber rifle for shooting bait and trapped animals too vicious to club, and the other a high-power rifle for wolves and foxes at long range. On the north shore of Lake Superior a very prevalent combination is that of a .22-caliber rifle and high-power pistol, the latter being usually a Luger.

There is, however, another class of hunters, hardly yet conscious of itself, to whom the combination gun offers a solution of a constantly growing problem. I refer to the big group of men whose hunting is restricted to a week-end trip from large centers of population. To such men the question of what sort of gun to carry is a serious one. Personally, I have accompanied a friend to a "sure-fire duck pond," only to find the ducks gone and to stroll through woodlots abounding in gray squirrels, with no arm but a 12-gauge shotgun. Conversely, I have gone to reputed squirrel country with a .22 rifle, and seen nothing but quail and cotton-tail. My final solution was to bundle up two high-power rifles and a shotgun and pass them

across the counter with a check, taking back an over-and-under combination gun handling, in the upper barrel, the 12-gauge shot cartridge, and in the lower, the .25-35 rifle cartridge. The guns I traded in were a brand new Springfield, a 20-gauge ejector Lefever, and a .250-3,000 bolt-action Savage. The check was for \$30. This was four years ago, and I have never regretted the exchange. Of course I have been helped a bit by seeing the catalogue value of my "trick" gun advance from \$130 to \$255, due to changes in the tariff and recuperation of the mark. Sure, it was made in Germany. Where else can one find a gun built for the individual instead of for the average shooter?

The next step was to tune up my acquisition. Its rifle sights had no possible adjustment for elevation, so I had to shop around for a cartridge which hit where they held. Before I found it I had tried seven different commercial loads; and, by the best of good luck, the cartridge which coincided with the fixed sights was the Remington Express, to my mind the best big-game load in this caliber.

The only deer I have shot with this gun went down in his tracks at 80 yards and was dead before I got to him. He was a full-grown buck, but one little 117-grain bullet in the neck was all he wanted. Admittedly one has to place his shots with a single-shot weapon of this caliber. But the gun is built to do it—fine balance, cheekpiece, cast-off stock and clear, open sights. Hardly the gun for snap shots at running game; but hold on! There was a buckshot load in the top barrel for just such an emergency. Anyhow, the hunting with a real kick is the solitary still hunt. The sport is to surprise the deer, not to be surprised by him. I admit that when I get mixed up with a bunch of hunters on a "drive" I prefer to have some fast lead-slinger; but for prowling through the woods alone the little buck-and-ball gun is hard to beat.

The other problem to be solved—in fact, it was the first taken up—is that of providing a squirrel load which will be safe in settled country. I tried some commercial "miniature" loads, and they were awful; leaded the bore and shot just anywhere! Next I went to reloading. My first loads were made up with the 86-grain pointed bullet of the .250-3,000, backed by 10 grains of du Pont No. 80; about the punch of the .25-20, I fancy. At least one of them drilled through a 2-inch oak limb and nailed the squirrel on the opposite side. These loads were accurate at 25 yards, but still had too much remaining range. So my final squirrel load utilized the 60-grain jacketed bullet of the hi-speed .25-20 load, with powder charge cut to 8 grains.

Both loads are dirty. But squirrel-hunting is leisurely work. There is plenty of time to take out a vest-pocket jointed rod and clean up before moving on from a kill.

At first I had all sorts of trouble with the two triggers on this gun. The forward

(Continued on page 26)

# A Tyro's Tests on Rapid Fire With the .38 Special Revolver

By A. R. MENDIZABAL

A FEW weeks ago, while looking through some old copies of *Outdoor Life*, my interest was newly awakened by Mr. Chauncey Thomas' "Gun Talks"—talk No. 45 in particular—in which Mr. Thomas refers to the very fast work done with the revolver by Messrs. McGivern and McCutchen. I may say that at the time the above articles were written rapid-fire shooting was beyond my ken, as I was just beginning to learn to shoot at stationary paper targets. I have been shooting the handgun for several years now; and, although not yet in the class with the experts, I can shoot with them without feeling too much out of place. I can generally make an 85 score on the standard revolver target both at 20 and 50 yards, and a few times I have scored in the 90's. Also for the last year I have practiced at odd times at flying tin cans with the .22 Colt Auto. Pistol. I claim the very poor showing of four tin cans hit out of ten targets thrown one at a time. With the revolver I have tried this only two or three times and did not obtain any hits.

Now there are several things I wished to find out for myself with reference to the above-mentioned shooting, namely:

1. How does a fair revolver target shot compare (time and hitting ability) with these experts at this kind of shooting?
2. Which is the faster and more reliable, double or single action?
3. Are the sights on a revolver used in fast shooting, or is it possible to shoot just by pointing the gun?

As this kind of shooting would be from a defensive point of view, against man or dangerous animals, the score will not mean the same thing as, at the standard target bull's-eye; but rather size of group, within limits, proper centering of same and rapidity of effective hits will be the determining factors. With this in view I decided upon the following tests: My plan was to go out and, without previous practice, to fire a series of groups using the gun as a single action,

as a double action, and also to fire deliberate groups for comparison and to try my speed of *draw and one hit*. Then I would practice for about two weeks every day and at the end of that time fire another series of groups similar to the first, so as to determine any improvement and further note the best method adapted to my own peculiarities of shooting. The revolver to be used was my favorite Colt Officers' Model, 6-inch barrel with a gold bead front sight

in 20 seconds, using the gun as a single action, starting with the revolver in the right hand. The group measures  $1\frac{3}{4}$  inches, and every shot would disable a man. Bullet holes marked 2 were shot using the gun as a single action, drawing from holster in the left front side of belt, shots fired in 12 seconds. Four shots in a 4-inch group all effective; the other shot, which I believe was the first fired in that round, was rather high right, but would also incapacitate a man. Shots marked 3.—Two groups of five shots each fired drawing from the holster and using double action, each group fired in  $7\frac{1}{5}$  seconds. Six shots are well within  $3\frac{1}{2}$  inches, centrally located; two are high left, one low left and one missed, probably the first shot.

**Target No. 1—** Shots marked with a circle were fired one at a time single action, drawing from holster each time. My best time for this kind of shooting (draw and hit), was 3 seconds per shot. I can quite understand now that Mr. Thomas' allowance of 2 seconds for a draw and *sure hit* is certainly difficult enough even when you are standing, waiting for the order to fire. It would be

and wide square open back sight (Patridge style).

MAY 14, 1927

I began my tests. I decided that the obvious target to use would be our "Ontario Rifle Association Time Match Target," which is a rectangular target 8 by 12 inches, showing the figure of the front tunic of a soldier's uniform. Regarding distance at which to fire the first tests, 12 yards appeared to be far enough. The ammunition used was U. M. C. factory, round-nose 130-grain bullet, adapted for mid-range target shooting. Shots fired, five.

**Target No. 5—**The results are shown in this target, which is a composite of three different targets. This was done for the sake of economy in space and also as a better means of comparison. Every bullet hole is accurately located as shot in original targets. Bullet holes marked 1 were shot

much harder when, as suggested by Mr. Thomas, the order to fire would be given any time, when walking through woods, climbing fences, etc. Shots marked x were fired using the double action. My times were  $3, 2\frac{3}{5}$ , and my best time  $2\frac{2}{5}$  seconds. Here I noticed, as in subsequent experiments, that although by using the double action my time was speeded up a great deal, I had several misses with my first shot.

What I did learn from the above first test was that probably for fast work it would be better to use the double action, the act of cocking while drawing from holster always slowing me up considerably. Something else: After firing the first shot I could fire much faster by the self-cocking method and with about the same accuracy.

MAY 28, 1927

Now that I was more familiar with this





kind of shooting (I practiced every day the drawing and snapping), I decided to try my next test at 20 yards, with the following results:

**Target No. 6.**—Shots marked 0 were fired double action, drawing from holster, six shots in 7 seconds. Three shots are within a 2½-inch circle, two are on the extreme left, and one low right. Shots marked 2 were fired single action, drawing from holster, six shots in 10 seconds. The group here is not very small but every shot would have been quite effective. The results obtained show considerable improvement in speed of fire, and also the grouping has not lost its effectiveness due to the increase in range.

#### JUNE 1, 1927, TESTS

**Target No. 8.**—Six shots fired in 20 seconds, starting with revolver in right hand. Four shots are possible, with the two others a three and a four. The time allowed in our rapid fire on the above target is 25 seconds for string of six shots.

The Standard 20-yard revolver target shown was shot the same day so as to serve as a measure of my skill. This target was shot after several practice strings, as I had not been doing any target practice since I started my speed shooting tests. Five shots are in a ¾-inch group, center to center; the other low shot probably being caused by a defective cartridge, as the bullet from it was only half buried on the boards holding the target. I may say that this group is one of the best I have shot, the ammunition used being one of my favorite hand loads: 2½ grains of Bull's-eye behind the U. M. C. 146-grain sharp shoulder bullet.

**Target No. 7.**—Just as a comparison I decided to use my .22 Colt Auto. Pistol, with which I was familiar in quick shooting. I fired two strings of six shots each (shown in right breast of target, fairly well grouped), but here I had the surprise of my life, as the time for each group of six was 11 seconds. I immediately fired six shots rapid

fire with the revolver, drawing from holster, in 6 1/5 seconds, as shown in the same target. Of course I do not believe that this is a fair comparison of the speeds of the two guns as I had not had any practice with the .22 pistol in quick draw, while with the revolver I had been practicing for the last two weeks. However, I have a suspicion that the revolver draws faster than the pistol; and also I noticed that when firing the revolver I pull the trigger much faster. It is just like following one single impulse to fire the six shots, while with the .22 Auto. each shot seems to be fired separately, and consequently much slower.

By this time I found that I was able to draw and fire the one sure hit in the required time of 2 seconds, and at times a little faster by using the gun as a double action.

I have not been able to answer all my questions fully, but after these few experiments I have made the following tentative deductions:

1. A fair revolver target shot would be quite outclassed in rapidity of effective hits by the man that is familiar with this kind of shooting. The target shot, however, with some practice in quick-draw-and-fire would easily outclass the indifferent shooter who may have had the same amount of practice at quick-draw-and-fire.

2. With the revolver, at least in my own case, I could do much faster and just as effective shooting by using the double action. I do believe, though, that at longer range than 20 yards accuracy could only be kept by using the gun as a single action.

3. I find that I have to use the sights on the gun, and in fact have to aim every shot. It happens that with my hold, when shooting single-action my gun is shooting vertically correct, but by using it as a double-action I have to aim about 3 inches to the right and slightly low. This is due to the different hold on the grip required for the two kinds of shooting. I did try two strings of six shots at 20 yards just by pointing the gun,

without the use of the sights, and only scored one hit, the gain in speed being not enough to compensate for the loss in accuracy.

I wish to take this opportunity to tell Mr. Kenneth F. Lee that I, for one, enjoyed and thoroughly agree with what he has so interestingly written on the subject of shooting. Next to shooting itself I believe there is nothing we like so much as to read about the experiences of other shooters. However, every article is apt to bring up some new question, and here is one that I should be glad to have Mr. Lee answer: Chauncey Thomas states that McGivern does actually use the sights on his revolver for all his fastest work, as was proven by changing the sights, when Mr. McGivern accordingly shot high or low. Now Mr. Lee, in "Exhibition Shooting," published in this magazine for February, 1925, states that "no rear sight is as good as any in snap shooting, although some shooters use a Lyman for this class of work." I should like to know the maximum range at which good work can be done without the use of sights, and what kind of groups an expert can obtain. I presume that after a certain range is reached the sights must be a necessity, even to Mr. Lee, as in his "Bunk and Ballistics," AMERICAN RIFLEMAN, June, 1925, he tells us that his favorite gun (for the rather large target of a deer) is a '92 model, "with a Lyman on behind and a flat-topped bar and a silver bead on the prow."

I should very much like to read articles on this branch of shooting from the real experts, so that we of the tyro squad may profit and better improve our form, for there is a new fascination and thrill in this kind of shooting which is lacking in the standard form of target shooting. Try it, brothers, and let us know your experiences.

[EDITOR'S NOTE.—This article was written by Mr. Mendizabal and sent in to us before the publication of Mr. Lee's last article in our September issue.]

#### THE LYMAN FRONT SIGHT RAMP

(Continued from page 11)

the barrel, is 7/8 of an inch long, and joins the ramp at rear in a neat fillet. The inside is reamed to fit the regular Springfield service and sporter barrels in place of the front-sight fixed stud. This diameter also fits the Krag barrel at about 24 inches from receiver, and the Russian at about 23 inches, this varying slightly with different barrels, or with the amount of "striking" and polishing done on barrel before the ramp is fitted.

The fitting of this ramp does not necessitate bluing the barrel unless it happens to need refinishing anyhow, as the ramp may be fitted firmly without solder. All that is necessary is to slide it to position, seat it snugly with two or three light taps with a piece of brass, then insert a slim "mouse-tail" file through the pinhole and file a corresponding groove in upper surface of barrel, after which a pin provided with the ramp is driven in place, and the whole assembly is

as rigid as if made in one piece. There is, of course, no objection to sweating the ramp in place, particularly if the gun is to be refinished anyhow. In that event the ends of pin could be filed off flush, the entire ramp polished, and reblued along with the barrel.

Gunsmiths and amateurs proficient with simple tools will also find no difficulty in fitting this ramp to barrels somewhat larger than those mentioned, by simply peening the band portion to larger size on the barrel, or in some cases by striking the barrel down to fit.

While some may regret that this ramp is slotted for the blade type of sight instead of being dovetailed for one of the standard dovetail bases, I believe that, all things considered, the slot will prove best all around. To supply a ramp already finished and ready to attach means that its height must be standardized, while it would have to be supplied in several heights if made to take dovetail sights, or else the sights themselves would have to be supplied in varying

heights, both of which plans would involve greater manufacturing cost, with consequent increase in purchase price. As made at present, the ramp sells at \$4, and the No. 26 sight in the height desired, at only \$1; and the whole assembly is strong, rigid, and exceedingly neat in appearance. The upper edge of ramp is cross-milled to prevent glitter, which it does most effectively.

There are possibilities in this ramp which the makers have not yet mentioned. For example, if fitted to a rifle requiring a much lower sight than the ramp provides, the raised forward portion could be readily filed down, and a dovetail cut for any standard dovetail sight, the ones made for the Mannlicher-Schoenauer rifle being best adapted to this purpose. Or, if the target-shooter wishes to use something like the Lyman No. 17 or the No. 2 Watson, he can take his measurement for height, cut down the forward portion of ramp slightly, and cut the dovetail in the ramp to fit the base of sight.

(Continued on page 41)



# Are We Going Too Fast?

By B. S. ALBERTSON, JR.

THERE seems to be a rage for speed nowadays, both in autos and in ammunition; and anything that does not have what salesmen call "get-away" goes into the limbo of Model T's. This is all right as far as autos are concerned. I like it myself, and admit that present traffic conditions require it. But, don't those same crowded conditions in the hunting field call for less speed and range, rather than more?

I am not at all familiar with Western hunting, but I do know that in Pennsylvania, Virginia and West Virginia there seems to be at least ten hunters to every square mile. Out "where men are men" and one can get out of sight of telegraph wires and out of hearing of railways the high-speed long-range cartridge has its place; but from what experiences have been told me of the two past hunting years in the East, either the gunner or the lawmaker is going to cut down on both speed and caliber—and that right soon.

All of us know that hunting with a rifle is forbidden in New Jersey, but few know that a bill was considered in Pennsylvania which would limit calibers used in that State. True enough, it never was brought to the Legislature, but it may be next time. And, if it is, we know from experience that it will go too far the other side of safety.

Why does a hunter insist upon a 3,000-f. s. bullet when his shooting is confined to ranges of not over 150 yards, and at game that seldom goes over 300 pounds? They all say, "Because of its flat trajectory," or "It packs the wallop required," or "Who the h— wants to go out with that old blunderbuss?" But let's see how much that flat trajectory stuff means at Eastern shooting ranges.

About the smallest practical caliber for the East is the .30-30, either Remington or Winchester. This with the 170-grain bullet gives 2,000 f. s., and the 200-yard trajectory has a height of 6.05 inches. Using 150 yards as the average range and half the trajectory height as the average error for holding, we have an extreme error of 3 inches in striking point. With the fastest .30-06 this error would be about 1½ inches, plus the added error caused by the greater recoil. Now let's jump clean up to the .45-90 H. V. and see how far she would miss. With the 300-grain bullet we have 1,985 f. s. and just about the same error as with the .30-30. Any man fit to be trusted out with a rifle would not find this an impossible handicap.

Now let's look at the "wallop" and see what becomes of it. The .30-06 packs 2,024 pounds at 100 yards; but does a Pennsylvania deer possess enough "stopping power" for that wallop to stay there and not go joyriding down the valley to the next gunner? It does not. The .30-30 carries 750 pounds at 100 yards—plenty to get in and stay there. The .45-90 takes 1,800 pounds to the target 100 yards, but owing to its greater

cross section that energy is consumed in about one-third the time taken by the .30-06. This means that the man behind the game goes home on his own feet. Even a clean miss with either or any of the lower velocity or heavier weight bullets does not entail the danger that a miss with the .30-06 does. That same high trajectory will put the bullet in the ground at not over 700 yards, while Mr. Springfield goes his merry way for a mile or better.

Several instances that have come to my attention will serve to show just how dangerous these long-range bullets can get. During the past season a party went up into the neighborhood of Williamsport, Pa. One had a .30-06, the others using the .30-30, .38-35 and .45-70 W. H. V. Mr. .30-06 went up a valley of his own one morning and left one of the party down where this valley opened up into several others, the remaining members going up the several draws. For at least a mile up the draw where the .30-06 had gone there was a clear view, so the chap who had been stationed at the forks went into a clump of bushes out of sight. This one draw being the only clear view he had, he watched it, trusting to his hearing for a warning of anything coming down the others. In about an hour he saw, well up toward the end, a deer step out; then a plump and a shower of bark. The deer went on and was killed by the .45-90 at about 60 yards. A post-mortum showed that the .30-06 had gone through the entrails without expansion, continued on and missed by 6 inches the watching gunner. As the layout was described to me, any bullet of greater weight or less velocity would have landed in a less nerve-straining place.

In another instance a carload of men were going from one camp to another. The road ran along the side of a high hill and overlooked a river, with the nearest hill across from it some two miles distant. As the car turned round a jutting rock a shot struck it in the back, going in just under the glass, burning the knee of one of the riders and landing in the battery under the front seat. Battery was N. G., but bullet was recovered in good shape. Curiosity led to an inquest on said battery, and judging by the course of the bullet from back of car to battery it had been fired from the hill across the river. In this case the shooter himself should have been in front of the gun, as he had been using the service 172-grain B. T. Several roofs have suffered from these long-range travelers, and I suppose many equally narrow escapes have never been reported.

If one brings these things to the attention of a prospect, it is usual to have him say that the older calibers are no longer accurate, even if they were in father's day. This idea is formed not by experience but by advertisements, and the many articles written on the super-superiority of the modern cartridge

over anything that has gone before. Therefore the .30-06 is the only thing that can be considered. Naturally, the maker of firearms wishes to displace the old with the new, just as the motor car manufacturer wishes one to sell that old battleship and get something modern; but I don't think the former has so good an argument.

I have not been able to do much shooting in the past two years; but prior to then I did quite a bit with the old-timers. While I do not suggest that we go back to black powder, we could very well take some of the old calibers and, using modern powders, get the velocity, accuracy and necessary killing power, while at the same time we forestalled laws that will compel us to do our shooting with the scatter-gun.

One of the most accurate of my old ones is an over-and-under rifle and shotgun made by B. C. Wood at Painted Post, N. Y. The caliber is .36, allowing for patch; and using the .32-caliber 115-grain Winchester bullet with 22 grains of bulk powder I can keep her inside of 5 inches at 150 yards. The estimated velocity is 1,600 f. s., and the shattering effect on all objects fired at is all that would be required for anything below Maine. Its light weight makes it a comparatively safe bullet for any hunting locality. Using the old bullet which was its original fodder, a round bullet of 46 grains, with 9 grains of FFG, this gun will stay on a quarter at 100 feet. Another very accurate old-timer is by J. and R. Bartlett, Chenango Falls, N. Y. This is of the days of '49, and has been used for hunting about everything that the gunners of that day and the West went up against, including the noble red man; and it carries a ball of .415 inch in diameter. There is a picket mould with it that, I suspect, came into the family later. The bullet runs 220 grains, and, judging by what it did to a black bear some twenty-odd years ago, it would do anything that the .30-40 could do at the same range, and then not forget to stop. I have used this rifle with the round ball, and as a crow-getter it seems to be right there up to about 75 yards. (Even Lo would have had to stop, look, and listen if he had caught it in the midriff.) Due to a very deep groove this old girl tends to foul up to beat all get-out, but I fooled her by using a small wad, and spitting on the patch. This treatment gives about 25 shots without any great loss of accuracy or difficulty of loading.

Naturally these old relics are too much trouble to load to expect anyone to adopt them for hunting, but they do give some indication of about what the limit of bore and velocity should be in the crowded conditions which are encountered when gunning in Pennsylvania, or any other place so near large centers of population. Another thing

(Continued on page 27)

# Thoughts

By DONEGAN WIGGIN

IN PONDERING over various phases of the anti-firearms legislation now so prominently in the lists of bills introduceable, one is tempted to visualize both sides of the question, if such be possible.

First, let us review the stand of the anti-firearm division; you know it's just simply the decent thing to do to get the other man's side of a matter, no matter how deeply we may chance to differ with him. Hence, the writer has tried to get the point of view of the gentlemen of New York *et al.*, who wish to prohibit the sale of concealable weapons.

First, the idea advanced that the stopping of sale will at once stop crime:

(A). The criminal, being unable to secure a "gat" will not attempt armed robbery for fear of the law. It's true that the average crook is a rather timid person, if divorced from his artillery, and could such be accomplished, a decided decrease in the "stick-up" artists' ranks would ensue. Of course, the more ardent would merely purchase a small shotgun or rifle and cut it down to concealable dimensions; purchase a machine gun and ammunition; secure a knife of the kitchen variety, or even a bit of iron rod or gas pipe, and rely upon the moral (?) effect to secure the desired effect—viz., by the numbers: "RAISE HANDS—ONE, TWO, —"

(B). By prohibiting the sale of concealable firearms, the criminal cannot buy them, and will be therefore unarmed, and an easy prey to the officer, also unarmed, save for a club, or "sap."

(C). By prohibiting mail orders, the criminal cannot obtain arms as easily as at the present time.

Having stated the oppositions' argument, may we investigate the accuracy of the claims? Thank you.

As regards the hypothesis of the criminal unarmed by the refusal of the right of purchase: It's rather a far cry to imagine a certain class who will not "bootleg" weapons, the sort so easily procurable abroad at three dollars and downward, and which would be salable at a hundred dollars, were such a measure in effect. Who wouldn't ante up a good sum for a revolver, whether of decent quality or otherwise, when that would allow him to stick up a payroll or bank messenger and "knock over" a sum of several thousands?

Again, the ease with which allowable weapons can be altered to concealable ones does away with the efficacy of any such measure; the writer cut down, with merely a small pocket knife and file, a single-barrel shotgun into a perfectly serviceable weapon in NINE MINUTES, BY FOUR WATCHES, and did not make use of vise or any tools other than the two mentioned, procurable in any store, and none of the three factors in any way forbidden to be had in one's possession. Think of this!

Further, while the makers of machine guns seem anxious to avoid the purchase of these weapons by the wrong parties, dealers in such commodities are not always so cautious.

Next, the knife; who would prohibit the purchase of the butcher knife? How about the rough tool made from a file, or a bar of steel? The pocket knife, of large or small size? All deadly, and personally, the writer would far prefer to have an honest (?) gun thrust into his ribs by "Knock-'em-Over Ike" than to have his weasand slit, or his abdomen slashed, for the purpose of securing his minute roll.

As a general rule, the hold-up man will not offer violence unless resisted. I'll say that much for him. The average of the reincarnated Turpins will always be decent enough not to shoot you up if you are lamb-like and hand it over without a squeal or a struggle. But if he has to cave your dome with a gas pipe, or jab a knife into you, as is generally the case when he does his stuff a *la* Strongarm, you lose more than the money you were saving for the initial payment on it.

As to the matter of prohibiting the sale of concealable weapons: what price law, anyway? It's estimated that there are three to five million handguns loose in the United States at the present time, and I'm rather inclined to boost that a couple of million more. Most of them are modern, or fairly so, such as Colt and Smith & Wesson revolvers, Colt, Remington, Smith & Wesson and Savage automatics, as well as the Harrington & Richardson revolvers and automatics, and Iver Johnson revolvers. Then there are the imported weapons without number, as well as sundry relic arms, even those of the Civil War days, and before. (Right here, let the author say that he'd just as soon have, for the first cylinder full, a good Colt or Remington cap-and-ball revolver of .36 to .44 caliber, properly loaded, as anything he knows of in modern make. They are reliable, and for some reason, whether it be peculiarity of twist or what, they generally produce very severe effects when used by a competent man at close quarters, as the cap-and-ball revolvers generally were used.)

As far as prohibition of sales is concerned, we know to what extent the Volstead Act has thus far succeeded in prohibiting the drinking of outlawed fluids. The writer is very dry in principle, and personal habits as well, but he does not delude himself with the view that just because it's a law, it's so. He can get hold of all the hootch anyone would care to drink without any great amount of exertion, any time.

Now, a gun is superior to a quart, in that it can't be "cut," can't gurgle, or the cork come out in transit, nor can it be successfully counterfeited with cold tea, as did some shameless ones to thirsty mortals less than a million versts from where this is written.

Furthermore, a person known to the writer says frankly that if any National law to end the sale of pistols be enacted, "I'll make mine in two years." Think it over!

And will not the man who had a few handguns extra be tempted to sell a few at a price of a hundred dollars each, too? I wot, yes. Few would be proof against such a profit.

Now, the mail order business: The very fruitful source of criminal's weapons today seems to be the mail order houses, who have a stock of European weapons and a small office in some block in a city. They require a signature on a printed form that the buyer is of legal age and wishes the pistol for lawful purposes. Well, how do they know who is a truthful man, and who not? A good defense it is, indeed! But the fact remains, that many weapons of the cheaper variety go from these houses to persons who never should have them.

A case springs to mind that occurred in the writer's home town: a messenger boy sent to a mail order firm and secured what he thought, and what was stated to be, a .25-caliber automatic pistol. But, the only cartridge fitting bore and action was the .32 automatic ammunition. The kid peddled the gun to a friend, and I don't know where it eventually ended up. In the river, I sincerely trust, as it was like something mentioned in Holy Writ—"fearfully and wonderfully made."

The fact is this: a youth of fourteen years sent a money order and got this gun, with no strings of any sort on it.

The writer, with recommendations from city and county officers in his possession, together with fraternal papers, etc., establishing his identity as a peaceful citizen beyond doubt, was refused a permit to secure and carry a revolver or automatic pistol while in the city of New York.

He was advised by several dealers, however, to "Just order it from us, and we'll ship it to your address in Jersey City, and how will the cops know you ever got a gun, anyhow?"

Some dealers are honest, keeping the spirit as well as the letter of the law; others are in business for what they can get out of it. Witness: In Philadelphia during the recent American Legion Convention, the writer was inspecting some Colts and Smith & Wessons in a pawn shop, when in rushed several negroes, one of whom was fighting drunk. He demanded the pawnbroker to sell him a revolver AT ONCE. The others of his race begged the dealer to refuse the sale, saying the drunken man desired to kill another negro. But the dealer replied, "I'll sell him a gun if he's got the money, any time," and while the drunk was pawing over a lot of hardware, making his selection, the writer left. He did not care to stick around the City of Brotherly Love as a witness to a shady killing case—not he.

No, stopping the sale of weapons will not prevent crime to any appreciable degree. The man who passed the revolvers into the Tombs Prison in New York City, before a riot there, which cost several lives, and which was mentioned in THE RIFLEMAN some time

(Continued on page 27)



# The Compensated Shotgun

## A Brief Description of the Action of the Cutts Compensator and the Use of the Compensator Pattern Tubes

By COL. RICHARD M. CUTTS, U. S. M. C.

THE Compensator was originally developed to increase the fire effect of Infantry by greatly reducing the recoil and jump of single shot and automatic weapons, thereby giving full control and increasing the number of hits per man, while at the same time practically eliminating recoil fatigue. This was successfully accomplished, and the effects of the Compensator have been extended to machine guns of all calibers; and in field guns, to the 37-mm. and the 105-mm. howitzer. The limit of its application is not yet known.

The Compensator has a distinct value in the sporting field on high-powered rifles in addition to its improvement of the accuracy of the rifle, by reason of the fact that the hurried shot, or second emergency shot, recoil may be disregarded entirely, is thus saving the time which is involuntarily used in assuming position. The rifle may be fired and the shot repeated from any position of delicate balance, an exceedingly important consideration in all big-game hunting.

In the high-power field the Compensator has the following advantageous major effects, as well as many useful minor ones:

1. Very great reduction in foot pound and kinetic energy of recoil.

2. Reduction, and in some applications complete elimination, of jump.

[NOTE.—These two effects are of great importance to the shooter, for when the punishment is removed from the recoil flinching is overcome, or does not develop, and an indefinite number of rounds may be fired without ill effects, the blow being felt more as a light slap than as a punch.]

3. Increased accuracy and increased accurate barrel life, due to the dampening of the barrel whip or vibration.

4. Definite increase in velocity, obtained entirely after the projection has left the gun muzzle.

The effects of reduced recoil, jump, and variable misplacement of the pattern center, due to the variable barrel whip of different loads, appear immediately and with full value in the application of the Compensator to the shotgun. So great are these advantages that they alone would justify the application of the Compensator to the shotgun. However, a greater and essentially more valuable field lies in the pattern control permitted by the Compensator. This has been worked out in so practical a manner that with a single Compensated gun and five small pattern tubes the entire range of shotgun use, under every possible condition of game and country, is covered. Not only is this the case, but the varying conditions of the day, or a change in game, may be met by simply changing pattern tubes in the same gun, the

four extra guns, as it were, being carried in the pocket.

The method by which this pattern control is secured is difficult to explain. In general, the barrel used is rather short, and is a very slightly modified cylinder, which delivers the shot column to the Compensator practically undamaged, and with the shot not materially softened by heat and friction in the barrel. While the shot mass is passing through the open expansion chamber of the Compensator, the gas pressure existing within the shot mass is discharged, for all intents and purposes.

The somewhat explosive effect on the column of shot due to the discharge of the interior gas pressure, and the pancaking effect on the rear of the column caused by the pressure of the powder wads after leaving the muzzle, take place while the shot column or mass is traversing the expansion chamber of the Compensator. The shot column which has thus expanded in diameter and elongated then reaches the recompression chamber of the pattern tube, where it is brought down to the desired diameter, is lightly compacted, and then fed to the choke in the forward end of the tube. As gas heat and friction heat do not occur at the same time in any magnitude, in the tube, the shot are not deformed to any extent, and in consequence they fly true, with excellent velocities even in the outside pattern edge.

During the passage of the shot through the Compensator and pattern tube the Compensator is dampening off still further the natural periods of vibration of the barrel; and, by the time the shot column leaves the pattern tube muzzle these vibrations have been so reduced that their effect upon misplacement of the pattern center or rupture of the compacted shot column will be negligible.

This shot recompression and realignment absorbs power, and ordinarily a reduced muzzle velocity would be expected in consequence. This, however, is not the case in practice, as the power for this recompression and realignment is obtained from that action of the gas in the compensator which normally would increase the velocity. In addition, this extra power is sufficient to permit of shortening the barrel to 24 inches, thus keeping the overall length of the barrel and its Compensator to 29-1/2 -30 inches.

The weight of the 6 inches of barrel taken off must be deducted from the Compensator weight in calculating the net gain, which will average from 4 to 5 ounces. With this slight increase, and with no lengthening of the barrel, the balance of the gun is not at all disturbed, as will be observed from the applications.

The steel of which the Compensator is made is an alloy of Chromium, Manganese and Molybdenum, and is exceedingly strong and tough. It never becomes hard or subject to crystallization and fracture.

### THE USE OF THE PATTERN TUBE

In general use there are three principal classifications of shotgun chokes, which are at times differently named by different makers. However, the terms "Full Choke," "Modified Choke," and "Improved Cylinder" probably convey definite meanings to everyone. The scope of the Compensator pattern tubes is far greater than that covered by these standard chokes, however. Three of the tubes give patterns approaching closely the average patterns given by the above named chokes, so for convenience, and to parallel general experience, the same names are assigned to these tubes. In addition, all the tubes are assigned a number for listing, which represents the diameter of the muzzle end of the tube in thousandths of an inch, the smallest number indicating the greatest choke, and vice versa.

Two of these tubes are of special design, not approached in pattern or range except possibly by a special magnum gun firing a special load. They are therefore taken out of the general classification of chokes, and are classed separately by themselves as:

### LONG-RANGE TUBES

#### *Tube 690, Long Range, No. 1:*

Developed and intended solely for long range duck and goose shooting, at ranges from 45 to 70 yards, with heavy loads of heavy shot. To obtain effective long-range patterns the pattern at 40 yards, it will be found, is altogether too close except for the most expert shot, while its density is far greater than is necessary or generally desirable. With good to excellent loads a 40-yard pattern of from 80 per cent to 90 per cent may be expected. At 60 yards an average 55 per cent pattern in the 30-inch circle is obtained, running up to 70 per cent in the 40-inch circle, using the same loads of No. 4 to No. 2 shot. At 70 yards 45 per cent patterns in the 30-inch circle have been consistently obtained with good standard loads of many makes.

#### *Tube 693, Long Range, No. 2:*

Intended to give a pattern similar to but more open than that of tube 690, to be used at ranges from 40 to 65 yards, with the heavy loads. This tube is designed to be slightly load flexible—that is, it will open its pattern a little with lighter loads and close it with the heavier ones. It has, however, many of the carrying-through characteristics of Long-Range Tube No. 1,



giving excellent though more open patterns at the long ranges. For the above tubes the equivalent of 3 3/4 drams progressive powder with 1-1/4 ounces of shot, No. 6 to No. 2, is considered a heavy load.

#### STANDARD TUBES

##### *Tube 705, full choke:*

Corresponds in general pattern percentage to what is commonly known as "full choke."

##### *Tube 725, modified choke:*

Corresponds in general pattern percentage to what is commonly known as "modified choke."

##### *Tube 740, improved cylinder:*

Corresponds in general pattern percentage to what is commonly known as "improved cylinder."

During the development work it was found that the standard tubes could, by means of a combination of recompression chamber and choke, be made quite flexible to load changes, and full advantage of this feature was taken in the final design. Each of the standard tubes 705, 725, 740 will close their patterns, within their scope, as the charges, weight and size of shot are increased; and will open their patterns as the charge, weight and size of shot are decreased. Tube 693, Long Range No. 2, is just sufficiently load flexible to obtain the changes in pattern desirable in a long-range tube, while tube 690, Long-Range No. 1, is always a maximum choke.

This feature permits the individual shooter to obtain practically just what he desires for his particular kind and type of shooting, if he cares to spend an hour or so patterning with different loads and makes, while the normal loads usual for the range and type of game are remarkably uniform in their respective pattern tubes. To lay down a general rule in this connection: As the average range shortens use the more open tubes with the usual loads for these ranges and game. As the range increases use the closer patterning tubes. With the Compensator the shooter is not committed to one gun which must be shot at all ranges, under all conditions and at all game.

If not hitting with the closer tubes, shift down in progression to the more open ones, using the same load, until hitting is secured. As skill increases the closer patterning tubes may be used at the longer ranges. Unless the shooter is an expert shot he cannot expect to hit, except occasionally, with the long range tubes at 40 to 45 yards and under; and very expert holding and experience is required to register hits on fast flying targets at the long ranges. The shooter not so expert will kill cleanly at the moderate ranges, with the tube suited to his skill; and the instruments are immediately available to take advantage of his increasing skill.

If these few rules are observed there will be more birds in the bag and fewer actually killed. Owing to the almost complete lack of deformed and mutilated shot from the Compensator, the outside edge of its pattern has a killing velocity, as shown on the chrono-

graph. A single low-velocity wild shot in the intestines of a bird will result in death from peritonitis, perhaps days later; and these deaths can not be controlled by a bag limit. The Compensator gun should conserve game by permitting the use of the proper pattern for the range and game; by the high velocity of its outside pattern edge, and by permitting the use of the pattern best suited to the degree of skill of the shooter.

The opinion of many who have studied the question over a period of many years is to the effect that at present probably many more birds eventually die of shot wounds than are brought to bag.

[NOTE.—In response to a demand for a more open pattern, Tube 835, Spreader, has been produced. This tube has at 30 yards practically the same pattern that Tube 740, improved cylinder, has at 40 yards.]

#### TRAP-SHOOTING

The Compensator patterns exhibit no balling or bunching of the light shot; and with from good to excellent loads the patterns are very uniform.

For the trap and with the usual trap loads the 705 tube is, as named, a full choke; and the 725 is a modified choke. The 690, Long Range No. 1, has frequently and consistently, with a good load, given 40-yard patterns of from 76 to 82 per cent. With a quick shot this means that at 35 yards the pattern has nearly 95 per cent in a 26-inch circle. Great ability is therefore required to hit at all with this dispersion. This tube might possibly be used by an expert shot with a heavy handicap; but there is little room for the human error, and it is believed that the 705 full-choke is all that will be required. For the quick shot and one without a handicap, the 725 will break consistently. Owing to its load flexibility the 693 Long Range No. 2 closely approaches the 705 when the lighter trap loads are used.

Actual pattern taking with the various tubes, at the range at which the shooter usually "gets off" should establish what is required for each individual. When handicaps are imposed the patterns may be closed by a change of tubes.

#### GENERAL

The Compensator tubes are designed to operate with chilled shot, and with good chilled shot little or no leading will occur. If the shot is a trifle soft a certain amount of leading will be found in the tube entrance after sustained firing. It does no particular harm, but the pattern is affected to a certain extent. The lead may be removed in a moment with a penknife. Soft shot will lead up more rapidly, but the lead is just as easily and quickly removed.

Owing to the great variations in guns and the number of makes it would be impracticable to supply barrels and Compensators from one source. The best results will be secured when the manufacturer of the desired gun produces the special barrel necessary to procure the full compensator effect, and installs the Compensator thereon.

In most cases it is probable that the compensated barrel and tubes could eventually be supplied to fit actions already in use; but because of mechanical difficulties over which there is no control a certain percentage of failures will result in attempting to fit with Compensator barrels already in service, even if the user is willing to accept a certain loss of efficiency, in addition to increased length and a possible disturbance of the balance of the gun.

At the present writing the Compensator has been completed for the 12-gauge single trap gun, and all single barrel guns, including pumps and certain automatics. Development work is under way for possible installation on the double gun, with prospects of success. The 12-gauge Magnum and the 10-gauge, are next in order, to be followed, possibly, by the 16-gauge if the demand appears.

#### A VISIT TO THE NIEDNER RIFLE CORPORATION

By N. H. ROBERTS

THE writer has just returned from a visit to his old friend, Mr. A. O. Niedner, and the Niedner Rifle Corporation, at Dowagiac, Mich., where he spent nearly two weeks in thoroughly testing out the new .25-caliber Roberts cartridge in his Niedner-Mausier rifle.

The Niedner Rifle Corporation very kindly gave me the unlimited use of their shooting house and range and I tested this rifle and cartridge at 100 and 200 yards, bench rest. Mr. Niedner also made tests of this cartridge at these ranges with the Mann V-rest, and I may state that the accuracy of the .25-caliber Roberts cartridge, with the best loads, is very fine indeed and will surely prove satisfactory to the most critical "gun-bug." A full report of the tests will be given in the near future.

The Niedner people are now fully tooled up for making barrels for the .25-caliber Roberts cartridge, for making the cases for the same, and have now on their books many orders for barrels of this caliber.

I found Mr. Niedner the same as usual, but working harder than ever, on rifle barrels, tooling up for the new Niedner telescope mount for hunting scopes, which is about to be placed upon the market, and on numerous "odd jobs" that rifle cranks are constantly sending to him.

Mr. Niedner also has perfected a new bolt-action that is more simple, stronger and generally superior to the Springfield, Mauser, or any other bolt-action now on the market. Two notable features of this action are: first, there is no external visible motion of the firing pin when the rifle is fired; second, by removing one master pin, the entire action is easily and quickly taken apart without the use of any tools whatever. This new action is adapted to any cartridge from the smallest center fire to the highest power Magnum cartridges. The action will be placed upon the market by the Niedner Rifle Corporation as soon as possible. I had the pleasure of examining and shooting a rifle with this new Niedner bolt-action, and it is far superior in construction to any bolt action that is now available.

# Latest Styles In Inner Tubes

By LIEUT. COL. CALVIN GODDARD

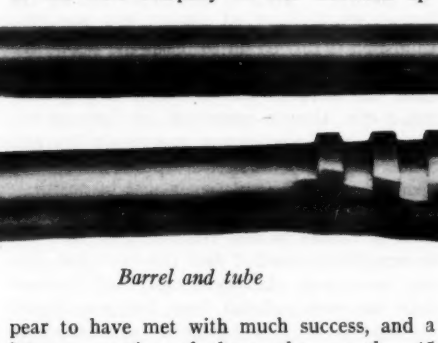
THE practice of inserting a tube, smooth of bore or rifled, into the barrel of a small arm for the purpose of adapting it to ammunition of a caliber less than that for which it was originally designed, is an old one. A search of Patent Office records shows many interesting devices of this kind, some of them dating back to the 60's. Such tubes have been developed for use both in rifled and smooth-bore arms. In the latter sphere they have been employed in the form of rifled barrels to be used in shot-guns, either extending end to end of the original barrel, as in the type formerly made by the Remington Arms Co., or just a few inches ahead of the chamber, as in the rifled bullet shell of some years' back. In rifled arms their chief usefulness has been in pistols and revolvers of military calibers, so as to permit practice with inexpensive ammunition of small-bore types.

Examples of such devices, all chambered for .22-caliber ammunition, include those for the .38 military revolver, formerly our service arm; for the Webley .455 British service revolver, and for our present .45 military automatic pistol. The .38 revolver affair was complicated in that it required, in addition to the rifled tube to be fitted into the barrel, separate bushings for each chamber of the cylinder, though it did, of course, have the advantage of providing a multi-shot weapon. The Webley scheme, illustrated and described not long ago in the RIFLEMAN, involves the removal of the cylinder and the insertion into the barrel of a single-shot tube which extends clear back to the fixed breech of the arm. Being bored eccentrically, the regular firing pin can be used without modification. This is an extremely serviceable and accurate little affair; but because it is adapted only to Webley arms, but few of which are in use in the United States, it is not likely to become extremely popular. Its relatively high cost is, too, a retarding factor in its sale. A more elaborate scheme, also British, combines a subcaliber tube with a special .22-caliber cylinder, this also for use in their .455 service weapon. Thus is rapidity of fire attained, but at the expense of more parts and increased cost.

Our .45 automatic pistol has been the subject of much serious thought on the part of designers of subcaliber tubes, but most of this

has been directed toward producing mechanisms which involve magazine fire and semi-automatic action. A short account of the developments of this character appears in Major Hatcher's book, "Pistols and Revolvers" (pages 185-187). The latest efforts of the Colt company in this direction ap-

pear to have met with much success, and a large proportion of those who use the .45 automatic would no doubt hail with joy the placing of this arm, a semi-automatic .22 on the .45 frame, into commercial production. But here, again, the element of cost will enter, for the new parts which go into the .22-caliber adaptation must of necessity be numerous and not inexpensive.



Barrel and tube

pear to have met with much success, and a large proportion of those who use the .45 automatic would no doubt hail with joy the placing of this arm, a semi-automatic .22 on the .45 frame, into commercial production. But here, again, the element of cost will enter, for the new parts which go into the .22-caliber adaptation must of necessity be numerous and not inexpensive.

It is therefore pleasing to know that a thoroughly practical device of this kind, of

weight rearward, due to the removal of the magazine, is not sufficient to be disturbing, or to appreciably alter the hang, or balance.

The forward end of the tube after insertion into the barrel projects slightly beyond the muzzle of the latter, and is held firmly in place by screwing upon it the small retaining ring. Continued firing does not tend to loosen the ring which, being well knurled, is readily removed when the tube is to be withdrawn.

To insert the tube, it is obviously necessary to remove the .45-caliber slide from its frame, and the barrel from the slide. The tube is then slipped into the chamber and on into the barrel, and the retaining ring screwed upon its tip as this projects beyond the muzzle. There should be hardly any user of a .45 automatic not familiar with the operations involved, or unable to perform them in a fraction of a minute.

As to accuracy, these barrels deliver it in fine fashion. Especially bored for Sedgley by the Winchester company, with a 14-inch

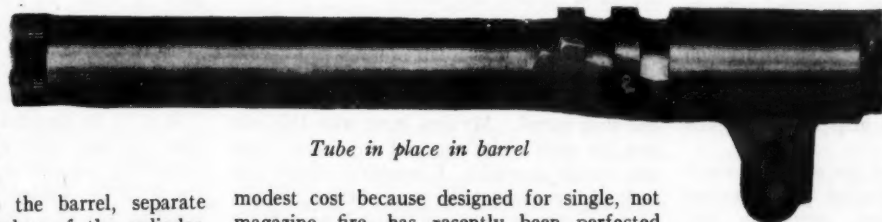
twist, they will, in the hands of the average shooter, place their .22 pellets in a circle materially smaller than one into which he can hold the 230-grain slugs from the .45 barrel. The point of impact of the .22, however, for such

tubes as I have thus far tested, appears to be uniformly higher at 20 and 25 yards (I have not tried it at 50) than for the .45 when fired from the same gun. Thus to put my .22's into the center of the bull of an L target at 20 yards it was necessary to hold on the edge of the 9-ring at six o'clock, while a six-o'clock hold on the edge of the 10-ring with the .45 was the right medicine for that particular arm. Again, sufficient variation exists between individual specimens of the .45 pistol to cause the same tube to group quite differently when assembled into different arms. As an example of this condition, a single tube fired in three different pistols gave groups in which the centers of impact, with respect to a .45 group from the same gun, were, respectively:

- 4 inches out at ten o'clock
- 3 inches out at twelve o'clock
- 2 inches out at two o'clock.

These variations are of a character which naturally can not be compensated for in any

(Continued on page 31)



Tube in place in barrel

modest cost because designed for single, not magazine, fire, has recently been perfected and is now being put upon the market. This little affair, which weighs less than three ounces and consists of but two parts, a rifled tube and retaining ring, is the product of R. F. Sedgley, Inc., of Philadelphia, whose Baby Hammerless revolvers have long been known to users of small arms. The tube, which is 5¼ inches long, and bored eccentrically to permit the use of the regular firing pin, drops readily into the .45 barrel, into the chamber of which its breech sets up snugly, the design being such that it can not be incorrectly inserted. Extraction is performed by the regular .45 extractor, the fired shell dropping out by gravity through the bottom of the empty magazine well, the magazine being removed when the tube is to be used. The weight of the pistol, tube in place, unloaded, is less than ½ ounce more than when ready for use as a .45-caliber arm in a similar unloaded condition, but with magazine in place. The difference in balance caused by the additional weight forward, due to the presence of the tube, and the lessened



## "COME ABOARD!"

By ELIZABETH COLE

FLYING smoothly over the spray-tossed waves, the ship of health is coming into port. Full sail, with pennants floating against the blue sky, she is homeward bound with her cargo of priceless treasure. On her



mainsail is the emblem of her successful trip—the double-barred cross. She is a Roman galleon and her oarsmen may not rest in their efforts to bring her safely home. She is an argosy, sailing with favorable winds, and she is symbolic of the happiness that can come from perfect health.

Twenty-four years ago the ship of health was launched—the educational campaign to control tuberculosis was started. During those years in both rough, unsettled weather as well as on fair, smooth seas, the ship has steadily kept to her course. Men with vision have been at her wheel and her crew has been made up of hundreds of partners who have "come aboard" to help in making the voyage prosper.

And these are some of the ways by which the crew has been successful in overcoming sea monsters, buccaneers, hurricanes and typhoons—in other words, the old pirate, sickness. Organization of the voluntary health agencies that carry on the educational campaign under the leadership of the National Tuberculosis Association has been enlarged from five States, who in 1904 actively worked together against tuberculosis, to forty-eight States with anti-tuberculosis associations. Affiliated with the States there are today 1,400 associations and societies throughout the country. There are now 608 sanatoria and hospitals with 72,723 beds for tuberculosis patients in the United States. In 1904 there were only 100 hospitals with less than 8,000 beds. There are over 3,500 especially trained tuberculosis nurses and thousands of others who are doing tuberculosis work. There are 600 tuberculosis clinics, where persons may be examined to keep track of their health. At preventoria and at summer health camps and in the hundreds of open-air schools, malnourished and sub-standard children are being built up in order to resist disease. Co-ordinated research work is being conducted in the best

laboratories in the belief that some day a cure will be found.

One of the most forceful and permanent methods used in controlling tuberculosis is education in the ways of health. The continuous plea for people to get plenty of rest, exercise, fresh air and nourishing food and that they go to their doctors for periodic physical examinations is really the keynote of the campaign. In the spring the tuberculosis associations will conduct an Early Diagnosis Campaign with the slogan, "Early Discovery, Early Recovery. Let Your Doctor Decide." Then in December during the annual Christmas seal sale, a big publicity campaign is carried on to teach the public the importance of sickness prevention. At this time the work of the associations is greatly aided by the co-operation of newspapers, magazines, house organs and trade journals who contribute editorial and advertising space for the Christmas messages of health.

The ways by which we measure the success or failure of any venture is to view the accomplished result. And the fact that during these years the death rate from tuberculosis has been reduced from 200 per 100,000 in 1904 to 87 in 1926 seems to be evidence enough that the work has been worth while.

The saying, "When my ship comes in" is a happy motto for tuberculosis workers. That day will come when tuberculosis is as well controlled as smallpox, plague and yellow fever. For the present, however, it is necessary to keep the ship of health constantly plying its course toward the desired port. Everybody has a chance to "come aboard" in December, when the tiny seals are being bought and sold.

## THE COMBINATION GUN

(Continued from page 18)

trigger fires the rifle barrel and the rear one the shot barrel. My first hunt with this gun was for prairie chicken, and, my habits with the double persisting, I regularly clicked the lock of the empty rifle barrel before shifting back to the shot trigger, until I wound adhesive tape around the forward trigger and the guard to make this impossible.

Then there was the time when I held my breath and squeezed on a difficult, straight-up shot at a squirrel in a swaying tree top and was nearly buried under the shower of falling leaves, squirrel, and No. 6 shot which came down after I pulled the wrong trigger. Today my reaction is so automatic that I pull the proper trigger without premeditation.

The score to this gun's credit in species to date is: prairie chicken, gray squirrel, duck, cotton-tail, partridge, snowshoe rabbit, porcupine and deer. I hope to add moose. This gun will do it, but one must wait until he has a side shot at 100 yards or less; then sting the moose in the neck with the rifle and soak him in the ribs with a single ball from the smooth bore. It's entirely a matter of finding the moose and posing him for the picture.

Were I acquiring another gun of this class today I should prefer the three-barrel to the over-and-under. Two shots are better than

one when one has waited long in a blind for the ducks to decoy; also to have both buck and ball available to follow up the rifle bullet is an advantage on big game.

By the way, the only three-barrel worth considering is one with three locks, one for each barrel. In these guns the commutator, shifted by a tang slide, simply connects the forward trigger with the rifle lock when set, and restores it to the right shot barrel when thrown off. Thus all three barrels may be fired in any desired order. Some cheaper guns of this type have but two locks, and the commutator operates between the right-hand lock and the shot and rifle barrels, restricting the shooter to two shots without breaking the gun to recock it.

Admitting an affinity for the 20-gauge, I would still stick to 12 for the shot barrels, since they handle an ounce ball, and more or heavier buckshot. In the rifle barrel I would specify .30-30. With modern loads this has a pretty good margin of shocking power for all but the heaviest game; just enough more than the .25-35 to be a decided advantage. I fancy a good squirrel load can be worked up with the 86-grain bullet of the hi-speed .32-20 cartridge.

A wilderness dweller, myself, I find an advantage not common to the city sportsman—I have just one gun to carry with me all the time; no catching the rifle every time I take out the shotgun, or vice versa, a real convenience in the woods.

These are one man's experiences with and reactions to the combination gun. Mine is the most generally useful of all the many guns I have owned. It fits into either wilderness living or week-end, semisuburban hunting equally well. It has solved most of my "which-gun-to-carry" worries, and I believe it will do the same for others.

It is to be hoped that appreciation of this type of arm will grow—and with growth will come demand—until such a gun is produced in the United States at a price about equal to that of a good medium-grade double-barrel shotgun. When the demand warrants quantity production this can be done.

## DOUBLE EXPRESS RIFLES

(Continued from page 14)

magazines with telescope, suitable for all game from rhinos or elephants down to antelopes. So outfitted, I will carry only one kind of ammunition—a most decided advantage.

I may add, to substantiate in the minds of the readers the conclusions I have reached regarding rifles, that I have done extensive tracking and hunting for about eighteen months in the French Equatorial of Central Africa. In the last four months of my sojourn there I bagged 42 elephants, many with tusks well over 100 pounds apiece, and one of them measuring 12 feet 8 inches on the shoulders; besides scores of buffalos, two gorillas, hippos, lions, etc.

I have official certificates testifying to the above performance in the above-mentioned period of time.



## ARE WE GOING TOO FAST?

(Continued from page 21)

about these calibers that I have not found noted is the fact that no matter what the bullet weight, within the limits of good sense or the powder charge, there is no appreciable change in the striking point within the range at which such arms were used. If this sounds involved take it this way: The B. C. Wood rifle spoken of above came to me with five different moulds—one casting round balls and four casting bullets of various other shapes, from that of the old Colt .36 revolver to a long one of close to 220 grains. Each mould had the powder weight stamped upon the handle; and everyone of these bullets will make groups not over one inch apart at 125 yards, using the same point of aim. No modern rifle that I have yet seen will do this.

The older guns seem to possess more personality than today's product does, and while I own some rather good samples of the latter it does not seem possible to become as attached to them as I have become to the old big bores. This is not because I am as old as they are. I was just coming along when the .30-06 was born; but they seem to be more of a sporting and less of a military arm than the high-velocity rifles do.

Some years ago I contributed the results of some experimental shooting with the big bores under the head of "Throwing the Barnyard Bull." With so many things to remember I doubt that many recall what it was all about, so I am going to repeat some of the things I discovered when comparing the old guns with the new.

In these experiments the object was to discover why the small-caliber, light-weight bullet, at high velocity, was so much more effective (as writers both of advertisements and articles were claiming) than the slower and larger bullets of twenty years back. I also wished to learn just where the flat-trajectory advantage began to show up. As all Eastern gunning is done at under 150 yards and on game of not over 800 pounds (except for the big game of Maine and Canada) the range and weight were confined to this limit. The subjects were farm animals that were to be butchered, work animals that had passed the age of usefulness, and surplus dogs of many sizes.

The arms used ranged from the .25-20 SS up to the .50-70 Army, as follows: .25-20, .32-20, .250-3,000, 7 mm., .30-40, .30-06, .303, 7.65 mm., 8 mm., .41 Swiss, .405, .45-70, .50-70, and .50-95. This gave a wide range of calibers and infinite choice of bullets, and covered the ground from the late 60's right up to the latest dodge in high velocity. The arms used ran from a '70 Springfield to a late Holland & Holland; so I think that the results, barring the difference in vitality between wild and domestic animals, may be taken as conclusive.

The "figure of merit" was taken as 100 per cent, to attain which it was necessary that the animal shot dropped where it was

hit, deduction being made for the distance traveled after being hit. The effect of trajectory was determined by marking a cross on the spot to be hit, aiming at it with standard sight setting for the arm used and noting how far the shot struck off. Error of holding was not considered, as all shooting was done as it would be in actual game-shooting, the rifle being thrown up to the shoulder, aimed and fired as soon as possible. Except in the case of an old .44 RF Remington, no appreciable difference of over 3 inches in the striking point was noted, and this was just as apt to be from the .30-06 as from the 50's.

The .405 stood first at the finals, with a percentage of .82, with the .45-70 next, .30-06 sporting Hi-speeds came in ninth, and the .303 military ran seventeenth, with a percentage of .17. In shooting sharks we used the .30-40, .30-06 and .43 Spanish. Twenty shots from a Springfield made seventeen hits, but no dead sharks, while nine shots from the .30-40 with 220-grain bullet made three kills. The .43 Spanish in fifteen shots made thirteen kills. All shots were made under as nearly the same conditions as was possible.

In view of the tendency of modern lawmakers to prohibit, and of the growing restrictions that are being placed upon, long-range firearms, with a likelihood of laws like that of New Jersey being placed upon all gunning, it seems to the writer that it is the part of wisdom to play safe and "get there first." Anyone who has been in on a Jersey deer drive knows how near it is to good sportsmanship; and the good Lord forbid that all States should come to such a thing just because the up-to-daters insist upon the use of a 5-mile gun on the 300-foot prospect.

There is no need of going back to Tower muskets; but it does seem time that we realized the uselessness of putting a 2-ton killer in 300 pounds of meat and expecting it to stop there.

## THOUGHTS

(Continued from page 22)

since, told that he had no difficulty in purchasing the weapons in New York City itself, where the Sullivan Law has abolished (?) crime. All he needed in the way of formalities was the dough.

If, in place of the present farcial proposals, the courts would function properly on the legal ammunition they now possess and refrain from short "jolts" and low bail, the crime menace would be toned down rapidly.

Furthermore, if the foreign criminal were shipped home to the place whence he came, it would aid greatly. The reports of most Eastern cases cause one to decide that most of the grist in the legal mill has a name like a combined cough and sneeze. Ever think of that?

Too much European criminal talent has been dumped upon our too hospitable shores.

Let us stop the modification of immigration laws. Drop your Congressmen a line—they pay far more attention to the letter from the home town than you ever would believe. Remember, a Congressman lives on votes, and yours is as good as any. Don't let him forget your ideas on weapons and immigration.

It's a firm belief of the writer that the greatest part of the present wave of proposed measures against the legal keeping or use of weapons is inspired by foreign money, disguised in some manner. It's rumored that a fund of five hundred thousand dollars is available to put these laws over on us; we can't find who has it or where it is, but are morally certain it is in some place where it can be used to disarm us. We can't even locate the manipulators of the fund.

And make no mistake: the rifle and shotgun are next on the list. Some of the fanatics, or dupes, have let the news escape in moments of unguarded fervor. The proposal is made that the use of firearms be forbidden altogether.

Now, one last thought, and we're done:

If our weapons are taken from us, in one generation the skill in their use, never as great as some of our Jingoists broadcast, will vanish; the blood will run rather thin, and the ancient ability of the free citizen to protect himself will be a thing of the past. Ponder this, you men who love this land.

*And certain foreign powers hate us, and one day they will come over after that wealth we are alleged to have gathered since the Great War.* Can anyone imagine a nicer pie than a country disarmed by its own legal departments, and the men unskilled in the use of firearms? I think not.

It is plain from history what is the fate of a conquered land and race. Men and women alike have been the sport of the conquerors, from the days of Chedarraomer to the days of '14 and the gray of the German columns pouring into Belgium.

But the race that has been accustomed to arms, other things being even halfway equal, never has been conquered, harassed though it may have been.

How about the matter: Will we allow overseas dictators to decide for us the way we shall live, in order that we may be an easy prey in years to come? If we are to thus supinely surrender, fifty thousand Yanks died in vain ten years ago.

We made the world "safe for democracy"—let's keep it safe for ourselves here at home.

## PACIFIC COAST RIFLEMEN AND GUN CRANKS, ATTENTION!

CAPT. G. L. WOTKYNs, of the Ordnance Department, and beloved of all true gun cranks, is now stationed at 9th Corps Area Headquarters, Presidio of San Francisco, Calif., and is desirous of meeting the riflemen and gun lovers in that part of the country. You will make no mistake in getting in touch with Captain Wotkyns.



Conducted by C. B. Lister

## Annual N. R. A. Gallery Schedule Announced

### "On Time This Time!"

PROBABLY no other four words could express quite as timely the announcement of the 1928-29 N. R. A. program of gallery matches. Year after year in the past, due to various unforeseen vicissitudes, it has been impossible to get the postal programs in the hands of shooters early enough to enable everybody to enter the early programmed matches. Likewise, year after year, National Headquarters has been on the job doing everything possible to work out a system through which every member of the Association might receive his annual program in ample time to go into any or all matches scheduled.

Frankly, this effort on the part of the Association has been rewarded for the first time this year. The culminating climax was reached a year ago when it was decided to incorporate the gallery and outdoor postal matches in one program and to publish also under same cover the N. R. A. Shooting Rules for all classes of competitions. But, because the 1928 program was in one sense entirely an experiment, it was not definitely known just how it would be accepted by the shooters, or what its consequent destiny would be. The almost immediate widespread approval by members which greeted the 1928 program, however, was sufficient assurance that the combined program of 1928 was exactly what the members wanted, and our printers were accordingly authorized to hold the type and set up for the new program now being printed. A copy will be mailed to every member of the N. R. A. and to each club secretary.

The 1929 program of postal matches, like the one it supersedes, gives a synopsis of all the shooting rules brought up to date. The various changes in these rules made by the Executive Committee during the year appear in the new program. It also carries in the Appendix as much "Shooting History" as available records supply or as space in the booklet permits. A convenient ready-reference index of matches appearing in the beginning of the booklet serves as a time-saver to competitors desiring to refer to any particular match. The Association confidently hopes the new program will again be favorably received and that the matches it covers will be widely patronized by the shooters. Co-operation on the part of those interested in offering suggestions for broadening of the program and clarifying the rules, etc., will be gratefully appreciated and all such sug-

gestions and constructive criticisms will be welcomed at National Headquarters.

Due to the rather crowded schedule of gallery matches now about to get under way, late entries in the matches can not be accepted, and for this reason members are urged to make their entries now before it is overlooked. The schedule below indicates the entry-closing date, the date of return of targets, and the entrance fee in all indoor matches scheduled for this winter. The coupon at the bottom of the page is for the convenience of any N. R. A. members who may not receive their copy of the 1929 program; or, it may be used by club members or others to whom the program is not mailed except upon request.

Simultaneously with the mailing of the program "on time this time," it is thought that the greatest obstacle surrounding the success of the postal matches has been overcome. Let's get an early start now in the direction of swelling the postal-match entries and thus help make 1929 another rifle-shooting year!

The schedule follows:

#### N. R. A. 1929 GALLERY SCHEDULE

(All are conducted in two sections—50 feet and 75 feet.)

Match	CIVILIAN MATCHES	
	Entry fee for— N. R. A. memb.	Club memb.
Prone Tyro	\$1.00	\$1.00
* December 1—† January 1		
Individual Prone	1.00	1.50
* December 1—† January 1		
Individual Sitting	1.00	1.50

NATIONAL RIFLE ASSOCIATION,  
BARR BUILDING,  
WASHINGTON, D. C.

Gentlemen:

Please send me the N. R. A. 1929 program of postal matches and shooting rules, just off the press.

- ☐ I am an individual member of the N. R. A.  
☐ I am not a N. R. A. member but like to shoot.

(Name)

(Street and number)

(City and State)

* December 1—† January 1	1.00	1.50
Individual Kneeling		
* December 1—† January 1	1.00	1.00
Individual Standing		
* December 1—† January 1	1.00	1.00
Tyro Championship		
* December 1—† January 1	1.00	1.50
Individual Free Rifle		
* January 1—† February 1	1.00	1.50
Metallic Sights		
* January 1—† February 1	1.00	1.50
Any Sights		
* January 1—† February 1	1.00	1.50
Gallery Qualification		
* Never—† Any time	1.00	1.50
Two-Man Team	2.00	2.00
* January 1—† February 1		
Tyro Team		
* February 1—† March 1	5.00	
Metallic Sights Interclub		
* February 1—† March 1	5.00	
Any Sights Interclub		
* February 1—† March 1	5.00	

\* Entries close. † Targets in Washington.

#### INTERCOLLEGIATE AND SCHOLASTIC (50 feet only)

Match	Entry fee for— N. R. A. memb.	
	Club memb.	
Individual Collegiate Champ.	\$1.00	\$1.50
* January 1—† February 1		
Women's Collegiate Champ.	1.00	1.50
* January 1—† February 1		
Freshman Team		5.00
* February 1—† March 1		
Intercollegiate League		10.00
* January 15—† Every week		
Intercollegiate Team Champ.		None
* Jan. 15—Fired 8. to S. Apr. 6		
Women's Intercollegiate Team Champ.		5.00
* February 1—† March 1		
Individual Scholastic	.25	.25
* January 1—† February 1		
Ind. Military School Champ.	.25	.25
* January 1—† February 1		
Intercollegiate Tyro Team		5.00
* February 1—† March 1		
Military School Team		5.00
* March 1—† April 1		
High School Team Champ.		5.00
* March 1—† April 1		
Girls' Interscholastic Team		5.00
* March 1—† April 1		
Junior Biweekly Matches		1.00
* January 1—† Every other week		

\* Entries close. † Targets in Washington.

#### MILITARY MATCHES (50 feet only)

Match	Entry fee for— N. R. A. memb.	
	Club memb.	
Individual Military Champ.	\$1.00	
* January 1—† February 1		
Company Team		5.00
* February 1—† March 1		
Regimental Team		5.00
* February 1—† March 1		
Military .22 Pistol Champ.		1.00
* January 1—† February 1		
Military Company .22 Pistol		5.00
* February 1—† March 1		

\* Entries close. † Targets in Washington.

#### PISTOL MATCHES (All are conducted in two sections—50 feet and 20 yards)

Match	Entry fee for— N. R. A. memb.	
	Club memb.	
Tyro Slow Fire	\$1.00	\$1.00
* December 1—† January 1		
Tyro Rapid Fire	1.00	1.00



* December 1—† January 1	1.00	1.50
Slow Fire		
* December 1—† January 1	1.00	1.50
Timed Fire		
* December 1—† January 1	1.00	1.50
Rapid Fire		
* January 1—† February 1	1.00	1.50
22 Slow Fire		
* January 1—† February 1	1.00	1.50
Free Pistol		
* January 1—† February 1	1.00	1.50
N. R. A. Ind. Pistol Champ.	1.00	1.50
* January 1—† February 1		
N. R. A. Ind. Police Pistol Champ.	1.00	1.00
* January 1—† February 1		
Gallery Pistol Qualification	1.00	1.50
* Never—† Any time		
N. R. A. Pistol Team		5.00
* February 1—† March 1		
N. R. A. Police Pistol Team		5.00
* February 1—† March 1		

\* Entries close. † Targets in Washington.

### BETTER'N A SPOTTING SCOPE

AT ASSOCIATION ISLAND the General Electric Co. have developed a moving-picture target with the microphone immediately over the .22-caliber rifle, and when the rifle discharges the microphone actuates a relay which pulls out the clutch and puts on the brake and stops the picture exactly where you are, and wherever your bullet hits there is a great big quarter-inch round hole with a very bright light showing through it, so that there is no doubt where your bullet went. They use two machines, and while one is running, the other is running backward and rewinding, so that you have a continuous performance, shooting everything from blue birds to elephants in the course of a fifteen-minute picture run. For this work we used a well-known brand of non-corrosive ammunition shooting about 8,000 times, and used three light target rifles, and just to see what this ammunition would do we refrained from cleaning the barrel from the time we started until we finished, and they were shooting absolutely true at the end of the shoot.

### READY TO SHOOT

THE Leesville Rifle Club wishes to arrange gallery postal matches with clubs in Ohio or adjoining States. Conditions are old or new 50-foot N. R. A. target, any or all positions, any sights and N. R. A. rules. Address, A. R. Tripp, president of the club, Leesville, Carroll County, Ohio.

### SAN JOSE NOSED OUT BY MILITARY SHOTS

By T. W. CARROLL

A VERY interesting rifle match was shot Sunday, September 16, between the San Jose Rifle Club, N. R. A., Company E, 159th Infantry, San Jose Police Department, Fifth Fleet Division, U. S. M. R., the Sheriff's Office and Ex-U. S. Army Officers, each shooting a team of five men; 10 shots each, standing, prone and sitting.

The match was held on the joint range of the National Guard and the San Jose Rifle Club, N. R. A., at the Cooney ranch near the famous quicksilver mines of the same name. The Company D, 159th Infantry, team won first prize, San Jose Rifle Club, N. R. A., being a close second; San Jose Police Department, third; Naval Reserve, fourth; Sheriff's Office, fifth; Ex-U. S. Offi-

cers, sixth. While no records were broken, it was one of the finest contests that I have had the fortune to participate in.

It meant a great deal more than winning first place or winning prizes. It meant the getting together of a large crowd of marksmen from different shooting organizations, also a gathering of riflemen from all over the county. We never had such a meet before. This match is one of a series to be shot out at intervals. Not only the big rifle, but .22-caliber matches as well as many pistol contests will be staged in the future. Sixteen valuable prizes will be distributed to the lucky winners at a banquet to be held later.

Company E, 159th Infantry, took charge of the shooting arrangements at the range, furnishing pit men and officers and four telephone operators. They also furnished the guns for the shooters who did not have Springfield rifles; also loaned the rifles for practice for ten days before the match, so that everyone would have a chance. Company E, 159th Infantry, gives the banquet to the winning teams and those who helped to make the match a success, and the tables will be set for 100 guests.

That is the kind of co-operation that counts, and deserves special mention.

The large, beautiful cup was presented to the Company E, 159th Infantry, team last night, and they were given a great send-off at the California Theater.

Several hundred people attended the match and a big boost was given the shooting game. We took in a number of new members and expect more. Our local papers who had reporters on the grounds gave the match splendid publicity.

### KANSAS STATE VIGILANTE SHOOT

Fort Riley, September 10-11, 1928

#### OFFICIAL RECORD OF PARTICIPANTS IN ALL EVENTS— N. R. A. REGULATIONS

HIGH COUNTY TEAMS		Score
1. Thomas County:		
E. N. Glenn	191	
E. V. Snell	192	
Joe Schalz	185	
W. C. English	189	
Total	757	
2. Washington County:		
M. F. Gardner	178	
P. R. Neal	183	
R. Dominy	181	
C. F. Merickle	151	
Total	693	
3. Ness County:		
Joe Douglass	178	
D. O. Amstutz	173	
A. C. Kraus	165	
Wm. Ansaugh	172	
Total	688	
4. Ottawa County:		
A. R. Goodwyn	176	
R. Geisen	173	
John Nelson	167	
H. D. Billings	167	
Total	683	
5. Geary County:		
Dan Baker	176	
Earl Dundon	172	
Frank Rybacki	157	
James Lehane	166	
Total	671	

#### HIGH INDIVIDUAL RIFLE TOTALS

	Score
1. E. V. Snell, Thomas County	192
2. E. N. Glenn, Thomas County	191
3. W. C. English, Thomas County	189
4. Joe Schalz, Thomas County	185
5. P. R. Neal, Washington County	183

#### HIGH INDIVIDUAL REVOLVER TOTALS

	Score
1. R. A. Huse, Riley	270
2. H. C. Barrett, Harper	263
3. J. W. Hall, Pottawatomie	261
4. E. W. Richter, Riley	260
5. S. O. Reed, Douglas	256

#### RECORD OF SCORES OF THOSE WINNING MEDALS (Class A, 175 to 200)

	Score
E. V. Snell, Thomas	192
E. N. Glenn, Thomas	191
W. C. English, Thomas	189
Joe Schalz, Thomas	185
P. R. Neal, Washington	183
R. Dominy, Washington	181
Herbert Barrett, Harper	181
H. H. Monahan, Saline	181
Ray Byers, Butler	181
Bert Sherrod, Chautauqua	180
C. W. Riggs, Kingman	180
R. A. Huse, Riley	180
R. A. Rearwin, Saline	179
M. F. Gardner, Washington	178
Joe Douglass, Ness	178
R. A. Flanders, Seward	178
P. H. Wichers, Russell	177
F. J. Knox, Neosho	177
F. E. Franklin, Doniphan	177
Bert McKinsey, Jackson	177
W. H. Clevenger, Geary	177
Dan Baker, Geary	176
A. R. Goodwyn, Ottawa	176
E. J. Allen, Rice	176
Verne Newton, Sumner	176
C. C. Gilbert, Kearney	176
C. F. Willis, Neosho	176
Leo Brown, Jackson	176

#### CLASS B—165 TO 174

	Score
D. H. Smith, Montgomery	174
Ross Hayes, Montgomery	173
R. Geison, Ottawa	173
Hugh Bundy, Shawnee	173
Will Behrens, Gove	173
Dave Amstutz, Ness	173
Earl Dundon, Geary	172
Wm. Ansaugh, Ness	172
E. S. Coulter, Shawnee	171
Roy Puyear, Kearney	171
C. B. Leslie, Jr., Meade	171
C. M. Hanson, Chautauqua	170
W. H. Harmon, Wilson	170
Dave Klose, Pratt	170
J. A. Mowrey, Morris	170
O. Koger, Shawnee	169
J. H. Willis, Kingman	169
D. A. McMullen, Doniphan	169
Fred Sudlow, Jackson	169
V. J. Rosecrans, Cowley	169
Joe George, Bourbon	169
R. K. Phelps, Meade	169
B. S. Wood, Russell	168
A. L. Wright, Bourbon	168
W. L. Smith, Stafford	168
P. O. Seavers, Stafford	168
John Nelson, Ottawa	167
H. D. Billings, Ottawa	167
Roy Shane, Gove	167
S. G. Hoar, Brown	167
John Conway, Norton	167
C. C. Butcher, Russell	166
James Lehane, Geary	166
E. Ersch, Mitchell	166
D. R. Wells, Labette	165
Glen Layman, Osborne	165
H. E. Shively, Allen	165
Geo. Gramlich, Dickinson	165
O. E. Murphy, Shawnee	165
F. P. Day, Lyon	165
C. N. Weston, Phillips	165
A. C. Kraus, Ness	165
Chas. Bartlett, Montgomery	165
Aubrey Cody, Clay	165
A. T. Huntington, Meade	165
C. Beardmore, Mitchell	165
Jess Hessler, Barber	165

#### CLASS C—158 TO 164

	Score
Cecil Calvert, Gove	164
F. G. Stambach, Osborne	164
Ned Hendrew, Atchison	164
E. L. Kreuter, Marion	164
Irvin Elmore, Edwards	164
George McRae, Kearney	164
R. T. Ishmael, Barber	163
R. B. Whitmore, Shawnee	163
P. F. Frieburghouse, Nemaha	163
R. J. Hall, Barber	162
Frank Olds, Ellsworth	162
Lloyd Tustin, Gove	161
D. T. Crabtree, Chautauqua	161
S. S. French, Shawnee	161
H. J. Williams, Brown	161
Irvin Wemmer, Montgomery	161
Frank Miller, Ellis	161
E. W. Wilson, Wyandotte	161
Geo. Fairchild, Ellsworth	161
Frank Harris, Stafford	161
E. W. Eustace, Smith	160
A. J. Nickerson, Rice	160
E. L. Huckle, Labette	160
R. A. Farris, Kingman	160
Harry Twyman, Kingman	160
John Williams, Shawnee	160
E. L. Nelson, Republic	160



R. Gingles, Phillips	160
E. W. Brown, Wyandotte	160
L. O. Freeman, Reno	160
Wm. Gough, Neosho	160
T. D. McVicker, Kingman	159
R. Williams, Coffey	159
Marvin Raven, Washington	159
John Lawson, Sedgwick	159
J. V. Stevens, Ellsworth	159
R. C. Duland, Morris	159
C. R. Doak, Labette	158
W. E. Lindsey, Kingman	158
Merton Fletcher, Cloud	158
D. H. Rodgers, Dickinson	159
C. W. White, Morris	158

## WYOMING STATE ASSOCIATION MEET

By E. L. CRABB

THE Ninth Annual Meeting of the Wyoming Rifle Association was held at Wheatland, Wyo., August 19, 20, 21 and 22, under the auspices of the Mount Laramie Rifle Association. Conditions were hot, windy and a very strong mirage prevailing at all times. The main feature of the meeting was the appearance to the front of a young eighteen-year-old shooter, E. T. Kirk, of Cheyenne, son of the well-known old shooter, Tom Kirk, of the same place. As the Griffith brothers, from Lovell, were there in strong evidence, the meeting was greatly enlivened by the competition between the two families. Following is the score:

SMALL-BORE MATCH			
(22-caliber prone, 50, 100 and 200 yards)			
D. L. Griffith, Lovell	95	94	47 236
E. T. Kirk, Cheyenne	97	94	45 236
R. L. Griffith, Lovell	96	93	46 235
Tom Kirk, Cheyenne	98	93	44 235
Mat. Katmo, Laramie	96	94	44 234

PISTOL MATCH			
(25 yards, L target, S. T. and R. fire)			
R. L. Griffith, Lovell	99	93	91 283
D. L. Griffith, Lovell	93	95	85 273
J. E. Stewart, Casper	98	90	76 264
T. R. French, Casper	93	77	90 260
M. Katmo, Laramie	86	90	84 260

LADIES' MATCH			
(50 yards, 22 rifles)			
Miss Margaret Mitchell, Wheatland	90	80	170
Mrs. A. E. Hoffman, Wheatland	82	83	165

RAPID-FIRE MATCH			
(200 and 300 yards)			
W. L. Seamans, Casper	48	41	89
L. C. Booth, Sheridan	44	40	84
F. C. Drube, Wheatland	45	39	84
L. C. Bishop, Douglas	40	42	82
T. R. French, Casper	40	42	82

OFFHAND MATCH			
(200 yards)			
R. L. Griffith, Lovell	89		
Tom Kirk, Cheyenne	87		
T. R. French, Casper	85		
E. T. Kirk, Cheyenne	84		
W. L. Seamans, Casper	83		

INTERNATIONAL MATCH			
(300 yards—prone, kneeling and sitting)			
R. L. Griffith, Lovell	88	86	70 244
E. T. Kirk, Cheyenne	93	86	59 238
T. R. French, Casper	86	80	60 226
J. E. Stewart, Casper	86	75	64 225
W. L. Seamans, Casper	90	71	64 225

STATE CHAMPIONSHIP MATCH			
(200 S., 500 K., 500 P., 600 P.)			
E. T. Kirk, Cheyenne	48	73	95 216
R. L. Griffith, Lovell	43	71	93 207
T. R. French, Casper	43	73	91 207
D. L. Griffith, Lovell	43	66	95 204
M. Katmo, Laramie	44	69	91 204

MESSICK CUP MATCH			
(1,000 yards, 20 shots)			
R. L. Griffith, Lovell	95		
A. E. Hoffman, Wheatland	93		
E. T. Kirk, Cheyenne	93		
Tom Kirk, Cheyenne	92		
J. A. Shaw, Wheatland	90		

KENDRICK CUP MATCH			
(20 shots, 1,000 yards)			
T. R. French, Casper	95		
F. C. Drube, Wheatland	93		
Tom Kirk, Cheyenne	93		
J. A. Shaw, Wheatland	92		
R. L. Griffith, Lovell	92		

## GRAND AGGREGATE MATCH

R. L. Griffith, Lovell	564
E. T. Kirk, Cheyenne	555
T. R. French, Casper	555
Tom Kirk, Cheyenne	549
J. A. Shaw, Wheatland	544

## TWO-MAN TEAM MATCH

(200 S., 200 R., 500 and 600 yards)

Lovell Rifle Club,	
R. Griffith, 184—D. L. Griffith, 185	369
Mount Laramie Rifle Club,	
Shaw, 186—Hoffman, 180	366
Union Pacific Athletic Association,	
E. Kirk, 189—M. Katmo, 163	352
Standard Oil Rifle Club,	
Stewart, 176—French, 175	351
Shoshoni Rifle Club,	
Crabb, 173—Booth, 166	339

## STATE TEAM MATCH

(Mount Laramie R. C., 200 S., 500 S., 600 S.)

Lucas	45	48	48 141
Shaw	42	49	49 140
T. Kirk	38	50	50 138
Hoffman	41	46	47 134
Total			553

## STEMEN COPS SERVICE RIFLE MATCH

SGT. H. F. STEMEN, of Company F, Spencerville, Ohio, defeated 2nd Lt. Noble L. Martin, Company G, Lima, by one point in the final service rifle match at Camp Ralph Neidhart, 8 miles west of Lima, September 23.

Sergeant Stemen scored 84 points out of 100 for five shots in each of the positions slow fire at 200 yards, bull's-eyes measuring 10 inches. He and Lieutenant Martin were among the high scorers on the Ohio National Guard team in the National Team Match at Camp Perry.

R. G. Patterson, of Lima, placed third, with his offhand score of 23 out of 25, out-ranking Dr. M. E. McManes, of Piqua, president of the Ohio Rifle League. Each totaled 91.

Twelve experts from Lima, Spencerville, Bluffton, Wapakoneta and Piqua fired.

The summary:

	P	S	K	ST	T
H. F. Stemen, S	25	24	22	23	94
N. L. Martin, L	24	25	23	21	93
R. G. Patterson, L	23	24	21	23	91
M. E. McManes, P	24	23	24	20	91
L. D. Kimmel, B	24	23	21	22	90
O. C. Cannon, W	25	24	21	20	90
C. V. Stonehill, B	21	23	24	21	89
W. D. Edwards, S	25	22	20	19	86
A. J. Yearsley, P	25	22	22	14	83
R. S. Miller, L	20	23	19	20	82
G. F. Brinkman, S	21	25	19	16	81
L. P. Klemoeder, L	23	22	14	21	80

S, Spencerville; L, Lima; P, Piqua; W, Wapakoneta; B, Bluffton.

STEBENVILLE RAILWAYMEN WIN  
P. R. R. HONORS

(Reprint from a Steubenville, Ohio, daily.)

THE Panhandle Division Rifle Team, of Steubenville, Ohio, shot their way through to a clean victory, winning the team and individual rifle championship of the Pennsylvania System.

The finals were conducted at Altoona, Saturday, where the annual system athletic meet was witnessed by a colorful crowd of 15,000, augmented by fourteen brass bands.

The rifle team with first places for team and individual helped to strengthen the Panhandle Division hold on division supremacy with eight first places, and the Central Region piling up a score of 364 points against the Eastern Region's 191 points, after the Eastern Region had held first place for seven consecutive years.

## Rifle team scores:

	Average
Central Region	1918 383 2-5
Western Region	1896 379 1-5
Eastern Region	1893 378 2-5
Phila. Gen. Office	1871 374 1-5
Altoona Works	1864 372 4-5

## Individual championship:

First—Evans, Central Region, 388.  
Second—Stevens, Philadelphia General Office, 387.  
Third—Thorp, Altoona Works, 384.

## Team championship score:

## STEBENVILLE TEAM

	50 yds.	100 yds.	Total
O'Neill, R. B.	196	194	390
Evans, G.	198	190	388
Hanlin, H. L.	194	190	384
Albaugh, O. T.	197	184	381
High, E. W.	184	191	375

Score for five high 1,918

Boles, F. C.	183	189	372
O'Neill, W. R.	186	185	371
Trotter, B. R.	187	180	367

Team trophy—silver cup; gold medals awarded each team member; also to the high individual.

## UNCLAIMED PRIZE CHECKS

N. R. A. prize checks are being held at the office of the Association for the following shooters who attended the National Matches at Camp Perry, and whose addresses are not known. They will be promptly mailed upon receipt of correct mailing addresses.

Captain Newell, 6th U. S. Cavalry.

P. Hornick, Pa., civilian.

W. D. Higgins, N. Y., civilian.

R. H. Knegeitty, C. H. Bronson, organization not known.

W. G. Andrews, Ohio.

C. H. Johnson.

## WANTS TO SHOOT GALLERY MATCHES

WE WOULD like to arrange a few postal matches with other clubs for this winter, shooting at 75 feet, iron sights, ten-man team, five highest scores to count. Any time between November 1 and March 1.

A. M. ROBERTS,

Sec'y, Wellsworth Rifle Club, c/o American Optical Co., Southbridge, Mass.

## NEW LEAGUE IN CONNECTICUT

ON TUESDAY evening, September 25, a meeting was held at the Remington Arms Club in Bridgeport for the purpose of forming another rifle league in Connecticut.

The league was formed and named the Southwestern Connecticut Rifle League and consists of the Quinnipiac Rifle and Revolver Club, of New Haven, Wepeuawog Rifle Club, of Milford, the Foresters Rifle and Pistol Club, of Shelton, the Remington Arms Rifle Club, the Bridgeport Rifle Club and the Harding High School Rifle Club, of Bridgeport.

The league officers elected were: President, Earl Naramore, of the Bridgeport Rifle Club; vice president, H. J. Gussman, of the Quinnipiac Rifle and Revolver Club; secretary, A. B. Gully, of the Remington Arms Club; and treasurer, George Ott, of the Foresters Rifle and Pistol Club.

The constitution and shooting rules of the Nutmeg Rifle League, which has been in successful operation for the last eight years, were adopted by the new league. This is the third rifle league in the State of Con-

average  
83 2-5  
79 1-4  
78 2-5  
74 1-5  
72 4-5

387.

Total  
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388  
384  
381  
375

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necticut, the Mohegan League, in the eastern part of the State, having been organized last winter.

With the Nutmeg League of 8 clubs, the Mohegan with 8 clubs and the Southwestern with 6 clubs there is a total of 22 clubs in the State shooting shoulder-to-shoulder matches twice a month all winter, and with 10 men to a team this makes a total of 220 men shooting in active competition, a record which I think places the State at the top of the list for activity.

At the close of the indoor season the champion club of each league will meet in a match for the State championship. It is rumored that the Mohegan League will consist of 12 clubs this coming indoor season. All shooting is done at 50 feet, each team member firing five shots in each position—standing, sitting, kneeling and prone.

E. E. COOKE,  
Sec'y, Conn. State Rifle Ass'n.

#### DONAT WINS STATE CHAMPIONSHIP

THE Connecticut State Small-Bore Championship Matches were fired on the range at Meriden, Conn., on October 7. The course called for 20 shots at 50 yards and 20 shots at 100 yards. The match developed into a battle royal between J. E. Donat and F. W. Rogers. Both turned in a 99 on their first target at 50 yards, and Donat repeated on his second target. Rogers registered a possible at this stage, which put him one up. On the first target at 100 yards Donat turned in 97 and Rogers 98, which gave him a two-point margin. On the second target at 100 yards, however, Donat came through with a possible and Rogers dropped three for a 97. Final score: Donat 395, Rogers 394.

The Quinnipiac Rifle and Revolver Club won the Team Championship with a score of 1,933. Remington Arms was second with 1,899, and Silver City third with 1,889. Teams of five, Dewar course.

Det. No. 21, Mass. civilians, alternates: Knight, W. E.; Moore, E. A.

#### CORRECTIONS TO BULLETIN NO. 86

6th C. A. R. O. T. C. The first score should have before it the name of J. H. Beaman.

#### LATEST STYLES IN INNER TUBES

(Continued from page 25)

way in the manufacture of the tube, and as a result a certain amount of fitting to the individual barrel and slide will be necessary in each case. This, it appears, can best be done by submitting the pistol to the manufacturer of the tube and allowing him to try in it various tubes until one is discovered which groups correctly with that particular barrel and slide. Such a procedure, though involving the bother of shipping the gun back and forth, is obviously preferable to attempting the adaptation of a certain tube to a given barrel and slide, a result that can sometimes be attained only after the expenditure of much time and effort. On the other hand, where a dealer has a considerable stock of the tubes on hand, the right tube can be selected by test at some near-by range.

The uses of such a tube are manifold. With .22 long-rifle ammunition available at extremely low cost as compared with that of the .45 product, the shooter who buys his own .45's can now indulge in extensive practice with his automatic at negligible expense. When he shoots, at the armory or other official range, issue ammunition of 1917 and 1918 vintage without expense to himself, but wishes additional practice, he can now set up in his cellar a simple target for his .22-45, shoot to his heart's content, and still remain on good terms with his neighbors and the police. Further, he will not suddenly awaken to the fact that he has, from repeated firing, let daylight through the cellar walls.

But even though the walls be stout enough to stop the larger cartridge, the neighbors distant enough not to hear, the police tactfully oblivious of his nefarious activities, and his gun cabinets overflowing with .45's that he has "salvaged," it is still to the advantage of his nerves and those of his family to use the .22; and his hold will show improvement from practice with this cartridge comparable to the results he could attain with the heavier one. The really good shot, the one who carries a .45 in the woods as a side arm, now has at his command an extremely accurate .22 pistol with which to bring small game to pot, with the addition of a short three ounces to his pack. Company commanders whose issue of service ammunition is limited and who wish to give their men additional training with the pistol, have at hand an inexpensive means to this end. Coming at a time when the perfection of the noncorrosive primer has practically removed the bugbear of cleaning from small-bore shooting, this little tube should receive an enthusiastic reception from the many users of the "pistol, automatic, caliber .45, U. S. Government."



#### DEAD-SHOT MILLER

By LLOYD MEHEGAN

THE above picture shows the presentation of a wonderful cake, made in the form of a figure "8" to our worthy president, Bob Miller. Before "Bob" had time to sample said cake, it was greedily devoured by the "Vultures" of the Golden Gate Rifle and Pistol Club. It is readily seen

that he did not receive the least benefit of the "trophy" bestowed upon him for his ability (?) as a rifle shot.

The cake was presented to him for making the most remarkable score of *eight*, on the 300-yard range, using the rapid-fire silhouette target. Such a wonderful score is certainly worthy of mention, and we will leave it to Bob Miller to tell just how it was done—also, how the cake tasted!

#### CORRECTIONS: NATIONAL MATCH BULLETINS

CORRECTION TO BULLETIN NO. 89—SEPTEMBER 16, 1928

##### NATIONAL RIFLE TEAM MATCH

No. 40 on the bulletin, Washington State Civilian Team, moves to No. 32, placing them in Class C. Each succeeding team is moved down one number, placing No. 35, Pennsylvania Civilian Team, in the unclassified group. The last number to change is No. 39, North Dakota National Guard Team, which takes No. 40.

In No. 22, California National Guard, the

alternate as Blount, E. V., 1st Lt., Ser. Btry., is crossed out, substituting the name Willey, J. B., 2nd Lt., 251 C. A.

In No. 50, New Jersey National Guard, add the alternate Esterly, A. H., Capt., 113th Inf.

By order of Colonel Myers.

A. R. EMERY,

Major, 16th Inf., Chief Statistical Officer.

##### OMISSIONS

No. 19, Kansas civilian, alternates: Rueger, R. J.; King, A. B. No. 20, Maine National Guard, alternates: Mullen, John P., 1st Lt., State Staff; Marchildon, Geo., sgt. State





(A Unit of the National Rifle Association devoted to teaching every boy and girl in America the safe and accurate handling of the rifle.)

Conducted by H. H. Goebel

## Biweekly Team Matches Off To A Great Start

THE new series of biweekly team matches is now well under way. As matches are completed the results will be announced by special bulletin for competing teams and a standing with credits for each match will be published in the *News*.

All Junior clubs in good standing with the N. R. A. J. R. C. regardless of their local affiliation are eligible for entry in these matches. At this writing the entries are 50 per cent greater than a year ago this time with the schools leading, but there are many Y. M. C. A., Boy Scout, and independent clubs to be heard from in the near future. These clubs have had a little delay in getting their programs under way but offer stiff competition when pitted against clubs of known ability.

The Lewis and Clark High School, of Spokane, Wash., and the Y. M. C. A., of Great Falls, Mont., have each entered three teams and are intent on bringing at least one of the series of trophies to their institutions. Porterville Union High, of Porterville, Calif., Buckley High, of Hartford, Conn., Blodgett Vocational School, of Syracuse, N. Y., Fresno High, of Fresno, Calif., and the Cameron Junior Rifle Club, of Alexandria, Va., have each entered two teams. Entries have been submitted from twelve States and the District of Columbia, giving the matches a real national aspect.

With a ten-man shooting team each firing ten shots for record, five high scores to count, the team possible is 500. Breaking down the scores for divisions, so that all clubs compete with teams of their own shooting strength, the following scores will decide in which division a team is automatically placed.

Teams are, however, permitted to advance to higher ratings and divisions at any time during a series of matches, and receive credit for all scores previously made, but at no time during a series of matches are they allowed to drop to a lower division. Teams submitting five-man-team scores of 460-500 are placed in Division A; teams submitting scores of 430-459 in Division B, and teams submitting scores below 430 in Division C.

The conditions for the complete program continuing in series through May, 1929, follows. If your club hasn't already entered and wants a complete program of National

competition that will hold the interest of every member for a full year, communicate with National Headquarters immediately.

### BIWEEKLY MATCH CONDITIONS

**Open to**—Junior Rifle Clubs affiliated and in good standing with the N. R. A.

**Teams**—One or more teams of ten members may represent each club, but no one member may fire on more than one team.

**Course**—One stage, prone, 10 shots for record, two shots in each bull's-eye. Five high targets to count for team total.

**Sighting Shots**—No sighters allowed on record targets. Sighting shots may be taken on practice targets before firing match.

**Rifles**—Any small-bore firing any .22-caliber rim-fire ammunition.

**Sights**—Metallic.

**Targets**—Official N. R. A. J. R. C. 5-bull (targets furnished).

**When fired**—At any time during the two-week period designated for each match. An entire stage must be completed the same day started.

**Entrance Fee**—\$1 per team per series. Entries will be made by letter.

**Returns**—Ten targets for each match, fired or unfired, must be received at National Headquarters within five days after close of each match.

**Periods**—Three periods of biweekly matches—October 6-December 15, January 12-March 23, April 6-June 1.

**Classifications**—Teams classified in Divisions A, B and C by scores submitted in first match but allowed to advance at any time during a period. Division A teams compete for first ten places for points in multiples of 30 up to 300 in each match. Division B teams compete for first ten places for points in multiples of 20 up to 200. Division C teams compete for first ten places for points in multiples of 10 up to 100.

**Prizes**—Suitable prizes to the three high teams in each division at the close of each period. Special prizes to the high team in each division at the termination of the three periods.

**Ties**—Decided first, by the highest number of matches completed in a series; second, by the aggregate score in all matches completed during a series.

### HAVE YOU REAFFILIATED FOR 1929?

THE fall and winter season is now here and our thoughts are directed to a program of indoor gallery shooting. The individual medal course and complete schedule of matches conducted biweekly in short series with several additional individual and team contests furnishes a full program for the year, but first we ask, "Are you properly organized as a club, and is your club in good standing with the N. R. A.?" Have you reaffiliated as an individual member for 1929? However, if you have reaffiliated and your club is in good standing, prepare for the splendid program of events set up for you.

All individual members and clubs are requested to reaffiliate at this time, avoiding the rush and delays that are bound to occur should all wait until the last day of the year to be placed in good standing. This is your organization and you can help considerably by co-operating now. It will not be necessary for clubs to go through the many details experienced when first affiliating for all that is needed is a revised list of active members and officers, with their home addresses. With this should be included the \$5 reaffiliation fee.

Individual members should submit one of the regular application blanks. If you do not have them on hand simply send on your fee of 25 cents with your full name and complete address. You will then receive a 1929 membership card and be placed in good standing for another year. Early action now will avoid any interruption or let-down in program on the first of the year.

### SHARPSHOOTER CLASSIFICATIONS IN EXPERT COURSE A NEW FEATURE

FROM time to time new features are added to the individual course of qualifications, making it more complete and attractive. Not so long ago the suggestion was made that as it is not always possible for our members to wear their medals, special pins be designed to be worn on the coat or waist the same as the Junior membership buttons. With due consideration these pins showing the rank of the competitor in corresponding metal to the medals for each grade were added—a bronze pin for Pro-Marksman, silver pin for Marksman, gold for Sharpshooter and a gold and enamel pin for Expert. These may be purchased by those who have already qualified for medals and by competitors who are about to qualify for the various grades. The price of the Pro-Marksman Pin is 20 cents, while pins for the advanced stages are 25 cents. Remittances may be included with qualifying targets for the medals, pins, or both.

For each of the stages completed a diploma is issued regardless of whether the medals or the pins are purchased. Between the Sharpshooter and Expert stages there are nine intermediate steps in positions for which bars for attachment to the Sharpshooter Medal, bearing blue stripes designating the steps completed, may be purchased at 15 cents each. In some cases members neglect to include remittances for these bars, and consequently receive but a letter in acknowledgment of their advancement. To



fill this gap between Sharpshooter and Expert and to give each member due recognition with something specific to show for their accomplishments these steps are now graded into classifications on the following basis: Members qualifying for the Sharpshooter Medal will continue to receive a Sharpshooter diploma. This diploma, however, will rank a member as a Sharpshooter of the "fifth class." When bar qualifications have been submitted for the first two bars a member will be known as a "Sharpshooter fourth class," and accordingly receive a gold seal with the classification printed thereon for attachment in its proper place on the Sharpshooter diploma. When additional bar qualifications are received qualifying for the third and fourth bars the individual will then be known as "Sharpshooter third class" and again receive a gold seal with its proper identification for attachment to the Sharpshooter diploma. Completing the qualifications for the fifth and sixth bars a member becomes a "Sharpshooter second class" and again receives a gold seal for attachment to the diploma. When the seventh and eighth bar qualifications are completed the member is a "first-class Sharpshooter" and again receives a gold seal. When the ninth and tenth sets of targets are submitted the member becomes an Expert Rifleman and receives his Expert diploma and gold medal gratis.

We believe that these changes will have a most wholesome effect upon our members competing for their Expert Rifleman Medals, as seals in recognition for their advancement as they compete in the course will tend to keep up the interest and enthusiasm. Any of our present Sharpshooters wishing one of the new Sharpshooter diplomas with the gold seals designating their advancement in bar qualifications for Expert may obtain them by simply returning to Headquarters the Sharpshooter diploma now held with a record of their standing to date.

#### CAMPS HAVE GREATEST YEAR WITH THE RIFLE

In 249 boy and girl camps throughout the country, the largest affiliation in history, the crack of the rifle mingled with the splash of the swimmer, the ping of the tennis racket, and the yell from the baseball field. Thousands registered a reflection of happiness upon completing qualifications for the various individual decorations. Camp Directors have been kind enough to write us thanking us for our co-operation and program, stating that the sport is one of the most attractive and finest sports in camp.

Camp Wood is again in the lead in the number of individual qualifications with 429 medals, 209 pins and 64 bars. These figures have been bettered in previous years, but this year range facilities and equipment temporarily handicapped early progress. However, with an early start next year we can look for record-breaking accomplishments. The Brown Memorial Camp, of Abilene, Kans., more than doubled their awards of a year ago, easily taking second honors with 351 medals and 12 bars, not crediting the

pins which in most cases were awarded in addition to the medal qualifications. Camp Greenbrier, of Alderson, W. Va., follows third with 168 medals, 58 pins and 145 bars. Mention must be made of Camp Lincoln, of Hubert, Minn., with 199 medals, 142 pins and 71 bars, a newcomer in the Junior events, and the two girl camps—Alleghany, of Ronceverte, W. Va., and Teela-Wooket, of Roxbury, Vt.—whose qualifications were well above the 200 mark. The following camps awarded more than 100 medals and bars:

Camp and location	Medals	Pins	Bars
Abnaki, North Hero, Vt.	169	87	96
Alleghany, Ronceverte, W. Va.	159	111	12
Bedford, Bedford, Ind.	200	111	12
Brown Memorial, Abilene, Kans.	351	17	11
Cheley Colorado, Estes Park, Colo.	120	9	11
Eberhardt, South Bend, Ind.	116	9	11
Greenbrier, Alderson, W. Va.	168	58	145
Ha-Wa-Ya, Harrison, Me.	129	91	37
Highlands, Sayner, Wis.	132	91	37
Idlewood, Lakeport, N. H.	118	60	8
Lincoln, Hubert, Minn.	199	142	71
Manning, Andover, Mass.	30	77	30
Mooselauke, Pike, N. H.	85	31	23
O-At-Ka, E. Sebago, Me.	79	79	30
Oklahoma State "Y", Grove, Okla.	205	59	59
Pine Tree, Pecono Pines, Pa.	99	99	4
Rogers, Kemp, Grove, Okla.	93	10	17
Storer, Toledo, Ohio	123	20	5
Tay-Low, Mobile, Ala.	124	20	20
Teela-Wooket, Roxbury, Vt.	196	82	82
Wapello, Friendship, Me.	92	106	68
Wigwam, Harrison, Me.	75	49	42
Wood, Elmdale, Kans.	429	209	64
Wyomissing, North Water Gap, Pa.	92	20	30

The figures below are by no means complete, as there are still approximately 50 of these camps that have not submitted final returns:

Camp and location	Medals	Pins	Bars
Abnaki, North Hero, Vt.	169	87	96
Adirondack, Glenburnie, N. Y.	11	11	11
Agawam, Crescent Lake, Me.	47	16	6
Alleghany, Clifton Forge, Va.	46	16	6
Alleghany, Ronceverte, W. Va.	159	87	96
Androscoggin, Wayne, Me.	16	5	5
Anthony Wayne, Welcome Lake, Pa.	5	5	5
Arapahoe, Byram Cove, N. J.	28	15	15
Arbutus, Mayfield, Mich.	57	66	3
Arcadia, Casco, Me.	27	51	51
Arrow, Spokane, Wash.	35	30	30
Barta Camp, The Casco, Me.	30	30	30
Bedford, Bedford, Ind.	200	111	12
Birch Rock, East Waterford, Me.	37	37	4
Black Bear, Marion, N. C.	26	26	26
Bob-White, Ashland, Mass.	3	2	2
Bonaventure, New Mills, N. B. Can.	74	3	3
Boothbay, Bath, Me.	25	25	25
Boycroft, Wolfboro, N. H.	30	21	21
Boy Scouts, Knoxville, Tenn.	20	15	15
Brown Lodge, Mallett's Bay, Vt.	20	11	3
Brown Memorial, Abilene, Kans.	351	12	12
Burch, Beulah, Colo.	14	5	5
Calumet, Canaan, N. H.	38	30	30
Carolina, Brevard, N. C.	45	45	45
Casady, Minong, Wis.	35	8	26
Cheley Colorado, Estes Park, Colo.	120	17	11
Chewonki, Wiscasset, Me.	41	61	61
Chickasaw, Brevard, N. C.	58	10	10
Chimney Rock, Chimney Rock, N. C.	88	88	4
Cobbouse, Winthrop, Me.	26	3	3
Contoocook, E. Jaffrey, N. H.	8	1	1
Court Oreilles, Hayward, Wis.	33	3	3
Crockett, Pueblo, Colo.	46	46	46
Crockett, Granbury, Tex.	17	17	17
DeWitt, Wolfboro, N. H.	47	32	23
Dr. Pettit Camps, Shelter Island, N.Y.	1	7	7
Dudley, Westport, N. Y.	76	3	3
Duncan, Peru, Vt.	3	3	3
Dunes, Peconic, L. I. N. Y.	9	9	9
Eastford, Eastford, Conn.	14	14	14
Eberhardt, South Bend, Ind.	116	9	9
Fernway, Monterey, Mass.	11	11	11
Fire Place Lodge, East Hampton Springs, N. Y.	12	12	12
French Broad, Brevard, N. C.	72	24	24
Great East Lodge, Sanbornville, N. H.	26	24	1
Greatlock, Dublin, N. H.	22	7	7
Greenbrier, Alderson, W. Va.	168	58	145
Half Moon, Great Barrington, Mass.	61	6	6
Ha-Wa-Ya, Harrison, Me.	129	91	37
Healthland, Crescent Lake, Me.	23	13	13
Hawthorn, Kears Falls, Me.	50	37	37
Highland Nature, North Sebago, Me.	17	22	23
Highlands, Sayner, Wis.	132	91	37
Idlewild, Lakeport, N. H.	118	60	8
Indian Acres, Fryburg, Me.	43	4	4
Indianola, Madison, Wis.	45	4	24
Interlochen, Interlochen, Mich.	33	1	1
Jolef, Wayne, Me.	7	7	7
Junaluska, Junaluska, N. C.	74	45	8
"K" Camps, Branson, Mo.	27	14	14
Kabeyun, Alton Bay, N. H.	14	14	14

Kamp Kill Kare, St. Albans Bay, Vt.	23	23	23
Kawanhee, Weld, Me.	70	70	70
Kent, South Kent, Conn.	38	38	38
Kee-Mo Sah-Bee, Mullet Lake, Mich.	28	27	6
Kennebec, Belgrade Lakes, Me.	29	1	1
Keystone, Brevard, N. C.	26	6	6
Kiamasha, Newton, N. J.	76	11	11
Kineo Caddy, Kineo, Me.	20	20	20
Kirk Lake, Mahopac Falls, N. Y.	32	32	32
Kyle, Catskill, N. Y.	17	17	17
Lafayette, Merrill, N. Y.	14	14	14
Lake Delaware Boys, Andes, N. Y.	39	39	39
Lake George, Glen Eyrie, N. Y.	37	39	39
Laurel Falls, Clayton, Ga.	38	2	2
Lenape, Tafton, Pa.	57	22	22
Lincoln, Keesville, N. Y.	35	1	1
Lincoln, Hubert, Minn.	199	142	71
Lincoln Hill, Foxboro, Mass.	24	1	1
Lookout Mountain, Mentone, Ala.	76	25	4
Machigonne, Raymond, Me.	40	45	45
Manning, Andover, Mass.	30	16	77
Maquam, Swanton, Vt.	46	10	10
Mashpee, Buzzards Bay, Mass.	17	1	1
Matonka, St. Leonard, Md.	10	2	2
Mechano, South Casco, Me.	14	1	1
Menatoma, Kents Mills, Me.	8	8	8
Minne Wonka, Three Lakes, Wis.	26	26	26
Minne Wonka Lodge, Three Lakes, Wis.	24	11	11
Mishe Mokwa, West Alton, N. H.	25	1	1
Mitchell-Harlee, Tyler Hill, Pa.	76	46	13
Mittiga, Rangeley, Me.	40	9	9
Moccasin, Lochmere, N. H.	3	1	1
Mohajo, Washington, N. H.	3	2	2
Monadnock, Jaffrey, N. H.	13	13	13
Moosalamoo Wigwam, Salisbury, Vt.	21	1	1
Mooselauke, Pike, N. H.	85	31	23
Mowgli, East Hebron, N. H.	59	41	40
Nakanawa, Mayland, Tenn.	19	12	12
Narragansett, Casco Bay, Me.	26	26	26
Natick Boy Scout, Natick, Mass.	25	1	1
Navajo, Honesdale, Pa.	36	20	20
Nokomis, Harrison, Me.	18	9	9
Norwich, Huntington, Mass.	41	6	6
O-At-Ka, East Sebago, Me.	79	79	30
Opontz White Mt., Lisbon, N. H.	42	42	42
Oklahoma State "Y", Grove, Okla.	205	59	59
Oneida, Woodgate, N. Y.	40	18	9
Oseola, Hendersonville, N. C.	15	15	15
Osh-Ki-De, Bruin, Pa.	8	8	8
Oseha-of-the-Dunes, Frankfort, Mich.	23	23	23
Passumpsic, South Fairlee, Vt.	16	16	16
Penn, Valcour, N. Y.	52	2	2
Perry, Camp Perry, Ohio	39	39	39
Pines Acres, West Swaney, N. H.	15	15	15
Pine Tree, Pecono Pines, Pa.	99	99	4
Pinnacle, Lyme, N. H.	70	11	11
Pioneer, Winstead, Conn.	14	14	14
Pocahontas, Meadow View, Va.	21	21	21
Pocono, Tobyhanna, Pa.	62	62	62
Pocono Pines, Pocono Pines, Pa.	34	34	34
Pokemoke, Richeville, Me.	40	40	40
Pomeroy, Greenwich Village, Mass.	6	3	1
Powhatan, Oxford, Me.	1	1	1
Quest, Rockford, Me.	6	6	6
Red Cloud, Brackney, Pa.	53	3	2
Rodney, Northeast, Md.	48	10	28
Restwell, Lake George, N. Y.	1	1	1
Rockbrook, Brevard, N. C.	74	20	1
Ro-Fre-La, Delaware, Ohio	4	4	4
Rogers Kemp, Grove, Okla.	93	10	17
Ropios, Harrison, Me.	42	42	42
Rotherwood, Alfred, Me.	66	35	1
Rosewell, Perry, Ohio	32	31	31
St. Bernard's, Gile, N. Y.	11	2	2
St. Johns, Hancock, N. Y.	38	38	38
Samoset, Lakeport, N. H.	38	38	38
San Luis Valley, South Fork, Colo.	9	9	9
Sapphire, Brevard, N. C.	59	59	59
Schoodie, Columbia, Me.	18	18	18
Sequoayah, Bristol, Va.	84	5	5
Sequoayah, Beech, N. C.	82	51	8
Serrana, Pike, N. H.	21	10	1
Shanagogi, Covington, Va.	18	5	1
Skylark, Billerica, Mass.	11	11	11
Soan-Ga-Taha, Bucksport, Me.	7	7	7
Sokakis, Bridgton, Me.	33	6	58
Songadeewin, Burton, Vt.	1	1	1
South Bergen Scout, Oakland, N. J.	62	27	10
South Pond Cabins, Fitzwilliam Depot, N. H.	36	5	5
Star H Ranch, Pine Cliffe, Colo.	2	2	2
Stone Hill, Hayward, Wis.	34	27	27
Storer, Toledo, Ohio	123	20	5
Summer Trails, W. Branch, Mich.	9	2	2
Sunrise, Orwell, Vt.	2	2	2
Sunset, Greenfield, N. H.	6	6	6
Tay-Low, Mobile, Ala.	124	20	20
Tecumseh, Delphi, Ind.	87	26	26
Teela-Wooket, Roxbury, Vt.	196	82	82
Terra Alta, Marion, N. C.	26	26	26
Terra Alta, Terra Alta, W. Va.	44	44	44
Theodore Roosevelt, Plattsburg, N. Y.	16	16	16
Ticonderoga, Ticonderoga, N. Y.	51	51	4
Tip, Clayton, N. Y.	23	23	23
Tone, Port Deposit, Md.	24	24	24
Tonde, Porters Corners, N. Y.	18	18	18
Toxaway, Lake Toxaway, N. C.	39	1	1
Tunis Lake, Andes, N. Y.	45	4	4
Urban Summer Camp, Los Angeles, Calif.	34	3	3
Wallawhatoola, Millboro Springs, Va.	53	2	2
Wamego, Corinth, N. Y.	6	6	54
Wampanoag, Buzzards Bay, Mass.	19	19	19
Wanaki, Cass Lake, Minn.	34	30	30
Wapello, Friendship, Me.	92	106	68
Wayns Camps, Jefferson, Me.	36	31	1
Webb, Wallington, Tenn.	16	16	16

Wentworth, E. Wolfeboro, N. H.	43	2
White Mountain, South Casco, Me.	22	...
Whooppee, Bloomington Spgs., Tenn.	53	3
Wickaboag, W. Brookfield, Mass.	16	...
Wi-Co-Su-Ta, Bristol, N. H.	5	4
Wigwam, Harrison, Me.	75	42
Wihakowi, Northfield, Vt.	30	18
Wild-Croft, North Windham, Me.	11	1
Wildmere, Harrison, Me.	18	16
William Lawrence, Center Tuftonboro, N. H.	41	...
Windsor Mountain, Hillsboro, N. H.	59	16
Winnicook, Unity, Me.	21	21
Winnemont, W. Ossipee, N. H.	24	...
Winona, Denmark, Me.	65	1
Wonalancet, Eaton Center, N. H.	11	11
Woposet, Bantam, Conn.	36	7
Wood, Elmdale, Kans.	429	209
Woodland, Phoenixia, N. Y.	23	...
Wulamat, Bristol, N. H.	26	...
Wyconda, Belgrade Lakes, Me.	46	46
Wyoda, South Fairlee, Vt.	...	31
Wyomissing, North Water Gap, Pa.	92	20
Wyonee, Harrison, Me.	8	7

The following camps are still to be heard from:

Camp	Location
Boy Scout	Knoxville, Tenn.
Brooklyn Boy Scout	Kenokwauke, N. Y.
Carter	Andover, Mass.
Cherokee	Beach Lake, Pa.
Fairwood	Torch Lake, Wis.
Frank A. Day	East Brookfield, Mass.
Greylocks	East Hebron, N. H.
Hyde	Hutchinson, Kans.
Ilahee	Brevard, N. C.
Island Park	Walton, N. Y.
Kairphree	Alpena, Mich.
Kappa Sigma Pi	Clarksburg, W. Va.
Katahdin	Etna, Me.
Kiaani	Naples, Me.
Koda	Bridgton, Me.
Mahoning	Rochester Mills, Pa.
Manitowish	Boulder Junction, Wis.
Marvin-Hillyard	St. Joseph, Mo.
Masapong	Dunstable, Mass.
McCoy	Tuolumne, Calif.
Minnewawa	Raymond, Me.
Mishe Mokwa	Bear Wallow, N. C.
Mondamin-Tawasentha	Tuxedo, N. C.
Nee-Ah-Gah-Neh	Niagara Falls, N. Y.
Owakonse Camps	Ontario, Canada
Passagawaukeag	Brooks, Me.
Pawnee	Southington, Conn.
Paycock	Brooks, Me.
Ronah	Hagne, N. Y.
Timanous	Raymond, Me.
Touring Boys	Ann Arbor, Mich.
Wahtonah	Brewster, Mass.
Wakonda	Portersville, N. Y.
Wequaquet	West Barnstable, Mass.

### PROGRESS AND MORE ACTIVE PROGRAM

WITH the ever-increasing popularity, more publicity and the enlistment of hundreds of live co-operative instructors and coworkers from all walks in life it is believed that again the coming season will be a most successful year for the shooting youngsters of America and their national organization.

A review of the past year's accomplishments not only reveals a most extensive program of competitive and individual match work with the rifle for Juniors, but it is apparent also that with added enrollment and activity the organization can become self-supporting, an essential necessity to the Corps if its hopes in elevating Junior rifle-shooting are to be materialized.

Changes in policy and program are largely instituted by instructors of organized clubs and adult leaders who are interested in the progress of this work. These changes are made for the best interests of the youngsters on the firing line, for after all it is only the shooter, whether he be young or old, whom we must look to if the game is to be placed on a par with our hopes.

Today the Junior riflemen affiliated with the N. R. A. have at their disposal the services of the entire personnel, which means that they have, with one exception, the same privileges and benefits of senior members.

A Junior may purchase at a considerable saving any of the equipment, including rifles, ammunition and accessories, sold by the N. R. A. Service Co., operated for the direct benefit of affiliated members, furnishing the best obtainable shooting equipment at as great a saving to them as possible. Juniors may also subscribe to THE AMERICAN RIFLEMAN, the official publication of the N. R. A. This magazine, published monthly, is the recognized authority on shooting matters in this country.

Junior members representing the individual membership of the Corps for the nominal membership fee of 25 cents the year, are privileged to compete in various National competitions, for which appropriate diplomas, medals, bars and trophies are awarded. In this connection it will be of interest to the Junior riflemen to know that an unusually extensive program of matches is in view for the coming winter season. As already outlined in a previous issue the new plan of biweekly team matches will get under way the first week of October. An affiliated club may enter any number of teams for each series of matches, but no one member may shoot on more than one team. As many as ten may represent each team, but the scores of the five high men will be tabulated for the record score of a team.

In addition to the biweekly team matches there are the additional events listed, as follows:

- Individual Scholastic Championship.
- N. R. A. Individual Military School Championship.
- Individual Junior Championship.
- Interscholastic Tyro Team Match.
- Girls' Interscholastic Championship.
- N. R. A. Military School Team Championship.
- N. R. A. Interscholastic Team Championship.
- Junior Gallery Qualification Course.

Rifle Clubs organized as high-school rifle clubs and clubs of Junior shooters affiliated with the Y. M. C. A., Boy Scouts, churches, camps and kindred organizations are extended an invitation to affiliate as J. R. C. clubs and enjoy the benefits of such affiliation. Club members are not required to join as individual members, but they are eligible for such membership and will be welcomed should they care to line up individually so as to be in closer contact with the National organization. It might be mentioned here that high-school rifle clubs—i.e., any organization representing a school of high or preparatory standing—upon payment of the \$5 affiliation fee will be issued Government equipment in accordance with the number of members on the team roster. This issue is governed by the Director of Civilian Marksmanship of the War Department. It is regretted that other groups outside of high-school ranks are not permitted to draw equipment. This is a matter coming under the immediate jurisdiction of the War Department, the regulation stating that such equipment can only be drawn by affiliated high, preparatory or a private institution of a least high-school rating.

### EXPERTS AND DISTINGUISHED RIFLEMEN

THE following members have learned to "hit where they aim." In qualifying for the Expert Rifleman Medal not only did they excel in one position, but proved that they were equally proficient in all four—prone, sitting, kneeling and standing. As a reward these members are now proudly displaying their gold medals.

#### EXPERTS

Christine Heer, Portsmouth, Ohio.  
Donald Loeber, Richmond, Va.  
Robert Shanklin, Jamestown, N. C.  
Roy Pereyra, Brooklyn, N. Y.  
William Telschow, Rutherford, N. J.  
Gretchin Pippen, Charleston, W. Va.  
Walser Prospere, Washington, Miss.  
Paul Burton, Ardmore, Pa.  
John Jay Darrah, McPherson, Kans.  
Theodore Kalisher, Lundhurst, N. J.  
D. Lintner, Columbus, Ohio.  
Robert A. Lewis, Brooklyn, N. Y.  
Louis Reizenstein, Pittsburgh, Pa.  
Georgia Graves, Edenwold, Tenn.  
Mary Gould, Nashville, Tenn.  
Nancy C. Worthington, Sweet Brier, Va.  
Harold Hansen, New York City.  
Roy W. J. Klenert, New York City.  
Bliss C. Shrapnel, Canal Zone, Panama.  
Sidney Strump, Brooklyn, N. Y.  
Clarence J. Harris, Jr., New York City.  
Leonard Saltzman, New York City.  
Lawrence Craig, Alderson, W. Va.  
Gus B. Baldwin, Alderson, W. Va.  
Ulisse Nolan, Alderson, W. Va.  
William Tuckwiller, Alderson, W. Va.  
Philip Rogers, Alderson, W. Va.  
Ferdinand Phillips, Brookline, Mass.  
Lorenz Kemmerer, Jamaica, N. Y.  
Walter Joslyn, Jr., New York City.  
Julius DeMay, Philadelphia, Pa.  
Lee Oppenheimer, New York N. Y.  
F. M. Hartmann, Chatham, N. J.  
A. F. List, Maplewood, N. J.  
Roslyn Pfeiffer, New York, N. Y.  
James White, Altoona, Pa.  
Hugh B. Emmons, Washington, D. C.  
Narvon Hogge, Richmond, Va.  
Willoughby Sheane, Bridgeport, Conn.

Three of our Experts, Virginia Sheffield, of Washington, D. C., Herbert Telsey, of Hunter, N. Y., and D. William Davis, of Washington, D. C., have completed the individual course of Junior marksmanship by submitting their Distinguished Rifleman qualifications. These members are still active in Junior competition and may soon be heard from the Senior work.

From the excellent report received from Mr. Howard Gale, of Charleroi, Mich., Headquarters will soon have the pleasure of chartering a Junior Club in that city. Although there is an insufficient number at this writing to affiliate as a club the local newspaper is co-operating in the drive for additional members, and a suitable plot of ground for the installation of a range has been donated by one of the city leaders. This ground is about 150 feet wide and 200 feet long, with an exceptionally steep hillside at one end which will be used as the backstop.



## MOSTLY PERSONAL

HEADQUARTERS was pleasantly surprised with a visit from Rev. H. Lascelles, instructor of St. Uriel's Boys' Rifle Club, Sea Girt, N. J. In spite of the fact that this club has been organized but a short time Instructor Lascelles presented several qualifications made by his members.

The Cameron Junior Rifle Club, of Alexandria, Va., which was so active during the 1927-28 series of biweekly matches, was first among our list of team entries for the season. A second team has also been entered, making for keener competition.

The Grover Cleveland High School Rifle Club, of St. Louis, Mo., will be glad to shoot matches by mail or telegraph with any other high school rifle club at any time this year. Teams will consist of ten shooting members, five high scores to the count for team total, each member shooting five shots on each of the four positions. The targets used are to be the N. R. A. J. R. C. official single bull and are to be returned after the competition of each match. Any clubs interested in matches of this nature should communicate with Lieut. R. C. Wilson, instructor of the Rifle Club at the Grover Cleveland High School.

The first report of accomplishments at the Y. M. C. A. Rifle Club of Hattiesburg, Miss., was submitted by Instructor George N. Bryan. These qualifications consisted of 12 Pro-Marksmen, 6 Marksmen and 2 Sharpshooters. Each member was presented with the medal and diploma in recognition.

Another of our progressive Instructors heard from! National Headquarters was pleasantly surprised with a letter from Mr. Fred Meyer, one of our former leaders who back in the year '21 interested his organization of from five to seven hundred boys of Los Angeles, Calif., in the sport of rifle-shooting. For some time Mr. Meyer, with the co-operation of the Los Angeles Y. M. C. A., conducted one of the most successful outfits of the Corps. Thinking back many of us will recall the presentation of several hundred awards by William Hart, Douglas Fairbanks and other prominent citizens, which won much enthusiasm and recognition.

The Sons of America has been merged with the Old Glory Braves, also a wonderful boys' program, and it is the desire that rifle-shooting again be featured. Although the majority of our former members have passed the age of Junior riflemen, there are several who are still eligible, and with the many newcomers we look forward to again renewing the same splendid affiliation.

We are listing below several leaders who since the last publication have satisfactorily completed the Correspondence Instructors' Training Course and received their commissions as instructor of the N. R. A. Junior Rifle Corps. In addition to completing the entire course of ten lessons with questions attached many have sent in their qualify-

ing targets for the Instructor's Medal. This award is won by submitting ten targets each scoring 35 points or better, and all having commissions are entitled to compete.

Harold P. Williamson, Jamaica, N. Y.  
Georgia L. Graves, Edenwold, Tenn.  
H. A. Brewer, Bartlesville, Okla.  
R. L. Chambers, Bartlesville Okla.  
Ned Klein, Spokane, Wash.  
George Pechin, Y. M. C. A., Wichita, Kans.

R. S. Hull, Perry, Ohio.  
Rupert Jackson, Honesdale, Pa.  
C. S. Brownell, Brooklyn, N. Y.  
John Sellman, New York, N. Y.  
A. H. Snyder, McPherson, Kans.  
James MacClymont, Arlington, N. J.  
C. F. McCormick, Frederick, Okla.  
W. F. Hoover, Cincinnati, Ohio.  
Helen L. Prentiss, Washington, D. C.  
James E. Moon, New York, N. Y.  
Bart P. Buckley, Bridgewater, Mass.  
H. O. Gibbons, Bala Cynwyd, Pa.  
J. Russell McShane, Brooklyn, N. Y.  
W. Cone Holliman, Bartlesville, Okla.  
C. E. Clapper, Mt. Hope, W. Va.  
G. J. Gruner, Chicago, Ill.  
J. A. Brown, Los Angeles, Calif.

During the past month an exciting Father-and-Son Shoot was conducted by the Charleroi Junior Rifle Club, Charleroi, Pa., on the club range. As many visitors attended, the object, purpose and code of the N. R. A. J. R. C. was explained by Instructor Howard Gale, and an outline of the safety rules of the club as drafted by the boys themselves was given. Mr. J. D. Berryman, president of the large department store in that city, gave an exceptionally interesting talk on obedience, loyalty, self-control and good citizenship. The club was commended upon the good work accomplished in such a short time and medals and diplomas were awarded to the members qualifying, totaling 6 Pro-Marksmen, 5 Marksmen, 4 Sharpshooter and 1 Possible 500 Bar. Among those receiving

awards was Howard Gerald Gale, age 9, who has qualified for the first three grades.

The Father-and-Son Match was shot without handicaps, and the sons outshot the fathers by a very large percentage. Next came the Swiss Match, open to everyone present, which proved of great interest, as well as the Big-Game Shoot. As champion of the Hi-Score Shoot, Mr. H. Porter was awarded an honorary membership in the club. Visitors became so enthusiastic over the shoot that additional matches were conducted for them and the contest was exciting and interesting. "On the whole," advises Instructor Gale, "it was a successful meeting and has stimulated interest that will bring results."

The Eugene High School Rifle Club, of Eugene, Ore., has 15 members. The club meets every Monday night, and every member is usually there to get his ten shots. To buy their cartridges and conduct various matches throughout the year the dues of the club have been placed at \$2.50 a year. This fund has made it possible to purchase two good rifles for use in addition to those owned by the club members.

Word has been received from Lieut. H. D. Jones, instructor of the rifle team of Baltimore Chapter, Order of DeMolay, that their team is now in condition to take on competitive matches. Any of our affiliated clubs who are desirous of arranging for such a match may get in touch with Lieutenant Jones at 225 N. Charles St., Baltimore, Md.

Miss Virginia Sheffield, of Washington, D. C., is the lone Expert who has completed the individual course of Junior marksmanship by submitting her Distinguished Rifleman qualifications. Miss Sheffield won this honor at Camp Alleghany, Alderson, W. Va., and is now well qualified to participate in the Senior program of events.

## A Quality Rifle at a New Low Price

Winchester Model 56



WINCHESTER RIFLE, Bolt Action. Model 56, 5-shot magazine, 22-inch barrel, weight 4 1/2 lbs., chambered for .22 Shorts only. Price .....\$16.00

## TARGETS

Single bull, per 1,000 .....	\$1.75
Single bull, per 500 .....	1.00
Five bull, per 1,000 .....	2.00
Five bull, per 500 .....	1.25

## CLEANING ROD



Ring Handle, Complete with Jag Tip—\$1.00

**N. R. A. SERVICE CO., Inc.**

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Washington, D. C.





# DIRECTOR CIVILIAN MARKSMANSHIP

Conducted by Lt.-Col. J. M. Coward

ADDRESS: DIRECTOR CIVILIAN MARKSMANSHIP, WAR DEPARTMENT, WASHINGTON, D. C.



## BALL CARTRIDGES, CALIBER .30, MODEL 1922E

A SUPPLY of ball cartridges, caliber .30, Model 1922E, has been made available for sale to N. R. A. members at a reduced price. This ammunition is first-class ammunition and should give excellent results. Any individual or rifle club desiring to obtain some good ammunition for target practice at a reasonable figure should not fail to order some of this.

These cartridges are loaded with du Pont IMR No. 17 progressive burning powder, giving a muzzle velocity of approximately 2,675 f.s. The primer is the F. A. No. 70, and the bullet is the 170-grain 6-degree boat-tail, full gilding-metal jacket. This was the bullet made just before the 9-degree was adopted. This ammunition is on hand at Frankford Arsenal, Pa., only, and is packed in clips and bandoliers, in cases of 1,200 rounds. Price per case, \$37.80; per bandolier of 60 rounds, \$1.89; packing charges, 50 cents for the first case, and 15 cents for each additional case in the same order; less than case lots, 75 cents.

## POWDER

THE powder now available for sale to N. R. A. members for loading caliber .30 cartridges is IMR 1185, lot No. 1592. This is a progressive-burning nitrocellulose powder, and is the same powder used in the 1928 National Match ammunition. A load of 50 grains gives an instrumental velocity of approximately 2,600 f.s. with a pressure of approximately 43,000 pounds. This powder costs 90 cents per pound, plus the usual packing charges, and is shipped from Frankford Arsenal, Pa., only.

## REPORTS OF QUALIFICATION

AS THE year 1928 is rapidly drawing to a close, club secretaries should give thought toward getting in the Report of Qualifications so that club members will receive their insignia as soon as possible. The outdoor target season has about come to a close in most of the Northern States, so that there is no real reason for delaying the reports any longer. The qualification year ends with the calendar year, so be sure to get the re-

ports in as soon as possible after your outdoor season ends.

## KRAG AMMUNITION

AMMUNITION for the Krag rifle is for sale at \$31.50 per thousand rounds. This ammunition is packed in cases of 1,000 rounds, and in cartons of 20. This ammunition will function perfectly through the magazine of the Krag rifle. It is loaded with the round-nosed 220-grain full-metal-jacketed bullet, and so far only reports of good results have been received from purchasers. This ammunition is being purchased in several case lots by some of the rifle clubs for the use of their members who like to fire their Krag on the target range.

## SPRINGFIELD SPORTERS AND M1 RIFLES

IT HAS come to our attention that someone, for reasons best known to himself, spread the erroneous information at Camp Perry that the Springfield Sporters and the caliber-.22 M1 rifles sold through the D. C. M. were all used guns, and that there were no new ones available for sale. This is absolutely false, for all of the Sporters and caliber-.22 M1 rifles sold through this office are new, and are in the very best condition possible.

Now is a good time to order either one or both of these rifles. Of course, the hunting season has closed in some parts of the country by this time, but the indoor gallery season is just starting. The price of each of these rifles remains the same, namely, \$46, plus \$1.34 packing charge. Many people like to purchase both, and they make a fine pair. Two shipped together, packing \$1.65.

## SHIPPING TICKETS

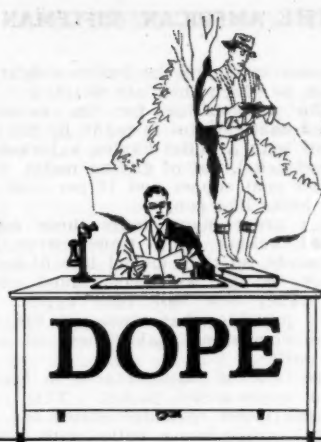
CLUB secretaries are again requested to be more prompt in signing and mailing to this office all shipping tickets pertaining to supplies issued to their clubs. Many of the secretaries are very conscientious in attending to this important matter, while others cause us quite a little extra work and trouble. Please remember that as soon as your requisition is approved, you receive a notice to that effect from this office. In a few days you receive the shipping tickets from the arsenal. This notifies you that the

shipment has been made. In due course the supplies arrive. By that time some of the secretaries have mislaid the shipping tickets or have lost them. Please remember that these shipping tickets are important. They become part of the record of the club in the files of this office and we have to get them even if we have to write a dozen letters to the club. As a matter of fact, we never write that many letters, but send shipping instructions to the club for the return of all stores, if the club secretary does not send in the shipping tickets by the third request.

Club presidents and executive officers can be of material assistance to us if they will see that the secretary attends to sending in the shipping tickets and reports promptly. Before many weeks all clubs will be sent the forms upon which the Annual Return and Annual Report of Firing are made. Club presidents can check up on the secretaries after the first of January and find out if these two reports have been sent in. Some club members have complained that we have not issued their clubs their annual supply of ammunition and targets and other things. They have been told by the secretary that he can not get the things from the D. C. M. Several of our fellow shooters came into the office at Camp Perry this year and wanted to know the reason why they were not being taken care of just like the other clubs. After these friends were calmed down, we told them we'd look into the matter. And although they had been told by their secretary that he had tried, etc., etc., to get things from the so-and-so D. C. M., we found that almost invariably their particular club had failed to get in shipping tickets covering the last shipment or were not in good standing with the N. R. A., or with this office, due to their neglect to take care of matters. We try our best to help you all, but we need co-operation.

## PACKING CHARGES ON AMMUNITION

PACKING charges have been changed on all purchases of ammunition. These packing charges are shown correctly in the new price list. Packing charges on case lots, 50 cents; packing charges on less than case lots, regardless of amount, 75 cents. This is mentioned because many orders are being received which include packing charges according to the old schedule.



RIFLES AND BIG-GAME HUNTING: LT.-COL. TOWNSEND WHELEN

SHOTGUNS AND FIELD SHOOTING: CAPT. CHARLES ASKINS

PISTOLS AND REVOLVERS: MAJ. J. S. HATCHER

EVERY CARE IS USED IN COLLECTING DATA FOR QUESTIONS SUBMITTED, BUT NO RESPONSIBILITY IS ASSUMED FOR ANY ACCIDENT WHICH MAY OCCUR.

A Free Service to Target, Big Game and Field Shots — All questions answered directly by mail

## Reamed Cases and Tight Chambers

By TOWNSEND WHELEN

I WOULD like to ask if, in your opinion, cases that have been reamed at the neck will cause much more throat erosion when used in an ordinary Springfield chamber than the regular unreamed arsenal case?

I have a very good Springfield barrel, one that I obtained back in 1916, and on account of its fine accuracy and general good condition I wish to give it the best possible care in every way. I also have quite a number of National Match F. A. cases of date of 1915 and 1916. These cases were fired once in the barrel in question and then I sent them to A. C. Niedner and had him ream out the necks. At the time I had intended sending the rifle to him and have him give it one of his special tight chambers, but I never did this.

The shells with the reamed necks I never used until lately, when I made up twenty or so, and fired them in this rifle. I got very fine accuracy; but I am wondering if the gas escape past the bullet when firing is much greater with these neck-reamed cases than it is with the plain unreamed case. Niedner reamed these cases at the neck just as he does for his special tight chamber. The metal at the neck doesn't seem very much thinner than the ordinary case neck, and after firing the neck doesn't seem to expand very much more than the ordinary case neck.

At any rate, I would like to know if these reamed cases are injuring my barrel through increased erosion or not? If they are not, I would like to use them, as they certainly give very fine accuracy in my rifle.—D. C. F.

Answer (by Colonel Whelen). I have your letter of July 28. Brass cases are drawn through dies, not turned, in the process of manufacture, hence they never have an absolutely true wall thickness throughout their circumference of neck. The thickness of the neck may, and frequently does, vary as much as .0003 inch in wall thickness around the circumference. When Niedner reams the necks of cases to a true wall thickness I imagine that the operation results in decreasing the thickness of the wall, on an average, about .0005 inch.

When the powder starts to burn in a cartridge case and pressure begins to rise,

the case, including its neck, at once expands to the limit permitted by the chamber, and at the same time the bullet starts forward. As a result there is an opening created between the neck and the bullet through which the gases rush. Gas continues to rush through this opening until the bullet has gone far enough forward to make a seal in the bore, probably about  $\frac{1}{4}$  inch forward, when the gas escape is shut off. This gas escaping ahead of the bullet can be clearly seen in spark photographs of the muzzle of the rifle taken just an instant before the departure of the bullet from the muzzle, and show a cloud of gas emerging from the muzzle before the bullet appears. It is this gas rushing past the bullet as it moves forward about the first  $\frac{1}{4}$  inch of its travel which causes the throat erosion seen in all high-power rifle barrels about the time that their accuracy begins to fall off.

Now, if the neck of the case be .0005 inch smaller than ordinary it of course means that there is a space about .00025 inch larger around the circumference and between case neck and bullet for this escaping gas to crowd through, and that more gas will crowd through, and there will be more erosion theoretically. But practically I do not believe that this increase in the opening will amount to anything at all. That is to say, I think that if a rifle were continually fired with cases reamed at the mouth in this way, no appreciable difference would be found in its life than in the life of a barrel fired with normal cases. Therefore I should not hesitate to use these cases if I were you.

The Mann-Niedner chamber which is cut to receive a case reamed perfectly at the neck, the neck being a perfect fit for the neck of the case plus the bullet, so that there will be no opening for gas to escape through between case neck and bullet, is fine theoretically, and when it works perfectly it gives fine accuracy and a barrel life more than double that of a rifle with the ordinary chamber; but it has been found impractical to use such a chamber because of the difference in the diameters of bullets. Bullets even the same make from the same manufacturer differ in their diameters often as much as .0005 inch, and this really negatives the whole thing.

For this reason such chambers have been abandoned entirely. The present Ordnance design favors a chamber as nearly as possible like the standard chamber for the .30-06 Springfield rifle as made at Springfield Armory.

### PROPER BORING FOR HUNGARIAN PARTRIDGE

I HAVE a Winchester 12-gauge automatic shotgun with a full-choke barrel and would like to purchase a more open barrel for the same, and would appreciate your advice on which would be the better barrel to get for Hungarian partridge and native pheasant in fairly thick cover. I have been thinking of the modified or the improved cylinder, but am not sure which would be the better barrel for this shooting.—H. E. M.

Answer (by Captain Askins). The automatic Winchester has been discontinued, though you may possibly still be able to get a new barrel. If not, you can have the one you have now rebored to modified choke. That would be about what you need for the pheasants, I'd think. They must afford some wild shots even in heavy cover. Improved cylinder is good for about 35 yards; if you do not shoot farther than that it would do. The modified choke would kill pheasants up to 45 yards at least. The first thing to be done, I suppose, would be to write the Winchester company about the new barrel.

### THE DIFFERENT .45-CALIBER HAND-GUN BULLETS

THIS day I was called into the witness chair to identify a sundry collection of bullets removed from one of our local rum-runners. So long as the cross-examination was confined to military projectiles I was at home. Several questions arose, however, that I am not sure I answered correctly.

1. We have the .45 cartridge used in the automatic pistol, model of 1911. This is also used in the revolver by the adoption of the clip idea.

2. We have the .45 of the lead-bullet type, this being used in the earlier type of the .45 revolver.

3. As we know, the ammunition for the model of 1911 has a bullet of cupro-nickel. The question is this, is there any other .45 manufactured having a projectile of cupro-



nickel, or as it is commonly called—a steel jacket?

4. How many types of .45 cartridges are there on the market?

5. If you were handed a cupro jacketed bullet of .45 caliber would you say it was possible that it was fired from other than a .45 automatic or revolver such as was designed to handle that type of ammunition?

6. As we know, the model of 1911 has a left-hand twist and six grooves. How about the Colt and Smith & Wesson revolvers? Do they have the same number and the same twist?

The situation is this: Our local runner was killed by a cupro-jacketed bullet that is identified as a U. M. C. Remington product. The day before this affair took place the defendant purchased a box of .45's of the lead-bullet rimmed-powder case variety. The prosecution is trying to link the two.

7. Do any other manufacturers use a letter on the base of the projectile other than the Remington "U"?—J. S. W.

Answer (by Major Hatcher). Your letter of January 7 was referred to me by Colonel Whelen because I answer questions connected with pistols and revolvers, while Colonel Whelen specializes on questions referring to rifles only.

1. The .45-caliber cartridges we have in this country are: first, the .45 automatic cartridge used in the automatic pistol, model of 1911, of the Government type. This has a bullet weighing 230 grains. This cartridge is also used in the model of 1917 Colt and Smith & Wesson revolvers by the use of the clip for holding three cartridges, or it can also be used without the clip, the only difference being that when the clip is not used the empty cartridges will not eject automatically but must be pushed out.

There is also a commercial type of this same cartridge which has a lighter bullet, the bullet weighing only 200 grains. These cartridges have a higher velocity than those with the 230-grain bullet, but will work the same with either automatic pistol or revolver.

Then there is a special cartridge made to shoot in the 1917 revolver without the clip. This cartridge has a 230-grain metal-jacketed bullet, the same as the automatic pistol cartridge, and, in fact, this cartridge is the same all over as the automatic cartridge except that it has a rim on the back of it to allow it to be used in the model of 1917 revolver without the clip. The auto-rim cartridge is also made with lead bullet. These are the only metal-jacketed .45-caliber bullets that are commonly manufactured and stocked in this country.

2. There is the very well-known .45-caliber Colt cartridge which is made for the large-sized Colt revolvers. This cartridge is much bigger than the auto-rim or the automatic cartridge. It is the most common .45-caliber cartridge found in this country besides the automatic pistol cartridge.

There are several smaller cartridges made in .45 caliber for guns which are more or less obsolete. One of these is the .45 Smith & Wesson, another the .45 Webley and another the .450 revolver.

I would suggest that if you wish to get rather complete information about these cartridges and the looks of them, etc., it would be very easily done by going to a local hardware store and borrowing one of their catalogues of the Remington, Winchester or any one of the big cartridge companies. These catalogues illustrate all cartridges now being manufactured by the

companies and give the bullet weight and the gun to which they are adapted.

3. The ammunition for the model of 1911 automatic pistol is made by the Government with a bullet having a jacket, not of cupro-nickel, but of gilding metal, which is 90 per cent copper and 10 per cent zinc, which looks like copper.

For a great many years these copper-jacketed bullets were tinned over after being made, so they looked like nickel. A year or so ago we discontinued tinning them. They now look like copper.

It is possible that some of the commercial companies make them of cupro nickel still.

There is a .45 manufactured in England with a cupro-nickel jacket. This is an automatic pistol cartridge called the ".455 Webley," which has a bullet with a somewhat blunter point than the .45-caliber model of 1911.

Frankford Arsenal, back in 1906, made some .45-caliber revolver cartridges with cupro-nickel jackets on the bullets. I doubt if any of these are still extant except a few in different people's collections of curiosities, such as my own.

4. On the market in this country you will find only the .45-caliber cartridges mentioned in my answers to questions 1 and 2.

5. It is certainly hardly likely that a cupro-nickel jacketed bullet could be fired in any other gun except the .45 automatic pistol or .45, Model 1917, revolver, still it is possible to load the metal-jacketed bullet into other types of ammunition and fire it in, say, the Colt New Service gun, if hand-loading were resorted to by the man that used it.

6. Colt guns all have left-hand twists and six grooves. This includes the revolver as well as the automatic pistol. Nearly all the Smith & Wesson guns have five grooves; but the Smith & Wesson model of 1917 has six grooves. The rotation in the 1917 Smith & Wesson is to the right instead of to the left.

7. Yes, there are other manufacturers who use a letter on the bottom of the projectiles. I can not give you details as to the different letters used by the different companies, however, as I have not the data before me; besides, they are subject to change at different times and with different calibers.

#### CYLINDER SLACK, TRIGGER PULLS AND SIGHTS

RECENTLY I purchased from the factory a .38 Smith & Wesson Regulation Police with 4-inch barrel, blued, and with round wood butt, and it seems to me that there is too much play in the cylinder, both endwise and sidewise; in fact, there is more play than in two other Smith & Wesson revolvers that I have, one of them, a .32 hand ejector, being over sixteen years old. However, I have given the arm a tryout with various makes of ammunition, including the Western Super Police, and I will have to say that this is the best revolver ammunition that I have ever used, although I understand it was developed for its knockout qualities instead of accuracy. I am wondering if I should write the company about this, and send the arm in and have this remedied, or if there is enough to it to bother with? The trouble seems to be that the cylinder stop does not entirely fill the opening in the frame through which it works, thus allowing the cylinder a little side play.

I have recently ascertained that the Smith & Wesson people can furnish this .38 Regulation Police in their target grade, with grooved trigger, straps, etc.; and from reading the catalogue I would infer

that these target grades are given preferred attention over the regular stock arms, being especially for accuracy, closer chambered, hand-finished action, etc.; and being a crank on the subject of handguns I can not bear the idea of there being a better quality of this arm than I already have, and am considering the purchase of one of these, and desire some advice from you before placing my order.

While I do considerable target-shooting during the holidays and on vacation, the arm is to be used primarily for police work in which I am engaged, and I do not like the action and trigger pull of the regular stock guns, preferring a rather crisp pull, but not as easy as on the regular target arm. So will you please advise me what would be the proper pull, expressed in pounds, so that I can make the factory understand what I want for this arm? The revolver I now have has an easy pull, for when ordering I specified that I wanted the action touched up so it would be smooth-working and have an easy pull; but it appears to me to be too easy, but possibly on account of the fact that I am not yet used to it.

Another thing: I like the regular fixed sights as furnished on this gun; but I notice that the holster is rubbing the front sight until it is getting bright on top, thus being harder to line up. Would it be advisable to specify the new Call gold bead, and could this sight possibly interfere with quick drawing, as I sometimes carry the gun in my outside coat pocket?

Do you consider the target grades more accurate than the stock arms, and do you believe one would be worth the difference in price for the purpose for which I want it?—W. M. H.

Answer (by Major Hatcher). It is true that very much side play in the cylinder of a revolver is a bad thing as it leads to inaccuracy; but all revolvers have some play.

Another thing is that the play in a cylinder is different when the trigger is in the forward position than what it is when the trigger is back and the hand is touching on the notch of the cylinder. This generally brings out some of the side play.

I would suggest that you draw the trigger of your revolver all the way back, holding it in this position, and then see if the side play is considerable. If so, I would send the gun to the factory to have the side play removed.

It is true that the target grades of Smith & Wesson revolvers are a little more carefully gone over than the regular revolvers, and for that reason they charge a little more for them; but the difference in accuracy is really not very great.

I believe that for your use it would be advisable to have a trigger pull a little heavier than the ordinary match trigger pull. In the matches you can have a trigger pull as low as 2½ pounds. In the military matches the minimum trigger pull is 4 pounds, and I believe that this is a very good trigger pull for general all-around use.

I believe that you can have the trigger pull made just what you want, and get it equal to that of the target gun, at much less expense than buying a complete target gun.

Regarding sights, it very true indeed that fixed sights on a gun have a tendency to shine up from contact with the holster; but these fixed sights are, in my opinion, better for a pocket gun or a holster gun than the target sights. I also believe that the rounded type of front sight is better for ordinary use than the square type, as it is much less likely to catch in the coat. One way to overcome the difficulty of having it shine is to roughen the top



of the sight just a little by rolling a file on it so as to make little ridges in the metal. Then if you blacken it by holding the sight for an instant or two in a gas flame or with a match it gives very good shooting.

To conclude, I believe that the stock gun is a better value for your use than the target gun, and it would hardly pay you to give the extra money you would have to give to get the target gun.

### SHOTGUN BARREL LENGTHS

PLEASE give me your advice as to the penetration and pattern of the 26-inch barrel when compared with the 30-inch barrel, each one having the same bore—in other words, cylinder-modified and choke.

I read all your articles in *Recreation and Rifleman*, and know the 28-inch barrel will get all the patterns and all the penetration possible out of the shotgun shell; but there is a little doubt in my mind, and in the minds of several other shooters in this section, as to whether the 26-inch will shoot as well as the 28- or 30-inch, each gun bored the same way.

Will you please give me a full comparison between the 26-inch and the other barrels?—W. M. P.

Answer (by Captain Askins). You can not get any very definite information because it depends upon the load. A big load at high pressure will burn all the powder in a short barrel, where a light load would require a longer barrel. Sweetley proved that enough ballistite could be put into a load to make all the powder burn in 12 inches of barrel length. On the other hand, 3 drams of the powder and 1½ ounces of shot would require 24 inches of barrel length to burn the powder clean.

The factories tell me—and they are the only people that know definitely—that the falling off in a 26-inch barrel, as compared with a 32-inch, 12-bore, is about 40 feet. A 26-inch is about as short as you can go, though, in 12-gauge. From reports from various factories, the gain of a 32-inch over a 30-inch is trifling. Then the 28-inch would lose about 15 feet, and the 26-inch perhaps the 40 feet given. The 28-inch is the best length, they say, for 16-gauge, and 26-inch for 20-gauge. Usually people ask for 2 inches longer to be on the safe side. As a rule the man who wants a 26-inch barrel doesn't expect to get range out of it. Short barrels are not intended for long-range shooting, for more than one reason. They can not be aimed so accurately, for one thing.

### PROBLEMS OF A BEGINNER

I HAVE always been a rifle enthusiast and since I owned my first air rifle have owned a number of rifles. Most of my shooting, however, was of the tin-can-target variety, and this year was my first real target-shooting. I was so darn green that at first my best scores were made offhand and the kneeling and prone and sitting positions were a handicap. I very soon got the hang of the thing and gained the advantages of these positions.

All of the shooting was with the .30-06 over the course of the newly organized Norristown Rifle Club. I use a Springfield Sporter with a star-gauged barrel and a Lyman rear sight. I finished the season with high score, making a general average of 85.8 over the 200- and 300-yard range on the regular N. R. A. target.

My rifle always gave trouble with metal-fouling, using the old 1918 ammunition supplied by the N. R. A. The coming season my ambition is to retain my lead and better my score, and I wish to take advantage of every opportunity to become very

proficient. Therefore I would be pleased to have you answer the following questions:

1. Please advise what method and minimum number of shots per day to be of real value; and is offhand the best practice?

2. Is snapping the gun on the bull of much value, and if so, what relation to actual shooting, such as for instance 25 snaps having the same practice as 10 actual shots?

3. After removing the stubborn metal-fouling I recently found a nasty pit mark underneath. There is a very fine pitting hardly noticeable about 6 inches from the muzzle and one large mark in the groove close to the land which is about 1-16 inch wide and about ¼ inch long. Is this going to destroy the accuracy of my rifle? What groups should it give with the 1918 ammunition, with the new boat-tailed ammunition when new and at present? I am very much provoked at this pitting, as I have always cleaned the rifle well after using; but the metal-fouling is what fooled me.

4. What would a new barrel cost and in event I desire to purchase a new rifle? Would you advise the purchase of a similar rifle or one of the other star-gauged Springfields to be used exclusively for this target work? I have a rather long neck, and the Sporter seems to fit me much better than the awkward service butt supplied by the N. R. A. to the club.—H. E. S.

Answer (by Colonel Whelen). I have your letter of January 20. The 10-cent pamphlet is known as "U. S. Army Training Regulations No. 150-5, Marksmanship, Rifle, Individual." It can be obtained for 10 cents from the Director of Civilian Marksmanship, War Department, Washington, D. C., or from the Superintendent of Documents, Government Printing Office, Washington, D. C. Stamps not accepted.

As a matter of fact, it is really the information in this training manual which you need. No one can become a good shot without either using this manual as a guide, or with the aid of a coach who instructs in conformity with this system. For example, take the matter of "snapping" the rifle which you mention. Snapping without proper methods will teach bad habits difficult to eradicate. But proper trigger-squeeze exercises, as described in detail in Paragraphs 28 to 34, inclusive, of the above manual are absolutely essential to good shooting, both to learning to shoot and to continuing in practice. No rifle shot of note neglects them. He practices them in all four positions every day if he can, or at least three times a week. They need not be continued long. Ten shots in each position, and about five runs of rapid fire in each position are enough, and probably if these were taken every other day they would be even more beneficial than if taken every day—that is, when one is in hard training for a match. Ordinarily this practice once a week will keep one in pretty good form. But I want to emphasize that these trigger-squeeze and rapid-fire exercises are absolutely essential, both to training and to keeping in training. The whole thing about it is that the average beginner has no conception that there is such a thing as a system of training in rifle practice. The majority of men seem to think that rifle-shooting is a gift. If they can not shoot well they say that they do not have the "gift." This is not so. The man who happens to shoot well without instruction—about one man in a hundred—is merely a man who by using his brains, or else accidentally, has developed for himself a system that is not very radically different from the system as laid down. The other men never will become

good shots until they adopt a similar system, or very preferably the standard system as laid down in T. R. 150-5. Any man can be taught to shoot by this system provided he has fair physique and fair eyesight. A beginner can be taught far quicker than a man who has done a lot of promiscuous shooting without any instruction, because the chances are that the latter has learned a lot of bad habits that it will be absolutely necessary to eradicate before he can become even a fair shot.

Model 1906 ammunition with 150-grain cupro-nickel jacketed bullet usually gives more or less trouble from metal-fouling. This ammunition is obsolete, and when the present supply is exhausted riflemen will be gainers. It has not been made since the war. The new service ammunition, M1, with 172-grain gilding-metal jacketed, boat-tailed bullet, is twice as accurate as the Model 1906 ammunition and gives no metal-fouling.

From your description I should say that the slight pitting of your barrel in several spots had not injured its accuracy a particle. A new barrel for your Springfield sporting rifle will cost about \$10. Please write to the D. C. M., who will give you the exact price, and also give you the necessary authority to ship your rifle to Springfield Armory to have the new barrel fitted. I should not advise changing your rifle. A trained rifleman can hold steadier, shoot quicker and aim more accurately, as a rule, with the sporting type of rifle than he can with the National Match type.

### GUN SHOOTS TOO CLOSE

WILL you help me out with a problem I seem to have with quail shooting? I incline to too quick shooting, which does not keep me from getting a fair bag; but at the end of the day most of my birds are badly torn. This causes me to be of opinion that, incidentally, more of my misses would be kills if my gun were more open. The gun is a Parker VH in .12-gauge, 28-inch barrel, right improved cylinder and left modified choke, or is supposed to be. The target card says right 125 pellets and left 225, at 40 yards with No. 7 shot.

Do you think it advisable to have this gun rebored to be more open than the above indicates? It seems to be about standard and weighs 6 pounds 14 ounces. I will be glad to have your advice on this, as I plan to have ejectors put on it this spring and would rather make one job of it if reboring seems to be in order.—G. A. M.

Answer (by Captain Askins). The .12-gauge gun is really too large for quail. A cylinder bore 20 is what you want. You couldn't do much in having that gun rebored, since it is already a cylinder in the first barrel. If the gun patterns no better than 125 shot, that is a plain cylinder and not an improved cylinder, granted the load is an ounce and an eighth of 7's. Best thing you can do, I guess, is to use nothing but scatter loads. They have less power and will scatter a little more.

### ANTI-RUST ROPES

WOULD kindly request your advice regarding the use of the anti-rust ropes in rifles. Note according to Hoppe's circular the use of such rope is strongly opposed, while Marble's states it is absolutely safe to use after a thorough cleaning. While I do not own an expensive rifle, I think a great deal of my new .22-caliber Marlin No. 39 rifle, and accordingly wish to give it the very best of care. I had intended using the anti-rust rope during the summer, when the solvent dries out so quickly;

and as I use the gun almost every weekend, gun grease is quite impractical.—F. G.

Answer (by Colonel Whelen). The anti-rust ropes are a substitute for the coating of a barrel thoroughly with gun grease. The only possible danger from their use would be if they lost their saturation of oil or grease they would then absorb moisture and hold the moisture in contact with the bore. I do not believe that this would be likely to occur. Back as far as 1907, while I was in the Philippine Islands, where the climate is exceedingly damp and hard on firearms, my company was selected to conduct experiments with these anti-rust ropes. Rifles were thoroughly cleaned, the bores rendered perfectly dry and then the anti-rust ropes, having previously been thoroughly soaked in melted gun grease, were pulled into the bores and the rifles left in this condition in the storeroom for months subject to damp air. At the end of that time no rust could be found in any rifle. I regard this as quite a severe test, and I think you will find that if your barrel is perfectly chemically clean and dry before you put the anti-rust rope in it will certainly protect the bore from rust for at least a year; but if the barrel is to be put away for a longer time I would rather trust to corking it up slightly at the chamber end and pouring the barrel full of hot gun oil and then letting the gun oil cool in there and remove the cork.

#### THE .300 MAGNUM

You may possibly remember that a year or so ago you were kind enough to sight in for me a .300 Magnum rifle. I have forgotten exactly what the diameter of the group was, but my memory is that it was about 3½ inches. The group that you obtained was fully equal to the best that I was ever able to obtain for the particular rifle, which had a 10-inch twist the same as the Springfield.

As I had a theory, based quite largely upon what various riflemen had told me, that a 14-inch twist was more accurate than a 10-inch twist, I had this particular rifle bored out to .350 Magnum; I also had Griffin & Howe build me another one exactly like it in every respect, but for .300 caliber Hoffman & Hoffman Magnum. I like the shape of this shell also at the neck, as it gave a slower taper down to the bottle neck, and it was my observation that with the former .300 Magnum there was higher pressure indicated in the shells at this neck than at the breech. I understand well enough that this is against the theory of equal pressures in all directions; nevertheless the appearance of the shells was very conclusive to me that this higher pressure existed, perhaps due to the liberation of kinetic energy of the gases at the high velocity there.

What I have been leading up to is to give you my experience with respect to this new rifle with the 14-inch twist and the better shaped powder chamber in the hope that it may be of some interest to you. My observation is that with the same loading the recoil is slightly less, although I can not determine this with any great degree of accuracy. I have found, though, that without any doubt at all I can shoot it more accurately than the 10-inch twist—more accurately, in fact, than I have ever been able to shoot any rifle before.

Enclosed you will find a target of five successive shots at 100 yards measured, without sling and without sandbag rest, just the elbows and with iron sights, sitting at a table. I am entirely convinced that the rifle is more accurate than the enclosed target, although I think this is a wonderful showing for the rifle, inasmuch

as these cartridges were not loaded for target shooting—in fact, were loaded with game bullets—and I was only sighting the rifle in and had no idea it was doing so well until I walked over and saw the target.

The depth of rifling in this barrel is the same as that used in the Springfield, and the width of the lands is somewhat narrower.—W. W. T.

Answer (by Colonel Whelen). I have your interesting letter of July 9. Mr. Griffin had sent me your recent letter to read. This is extremely interesting about your .300 Magnum rifle.

I have carefully preserved all the details of my little experience with your former .300 Magnum rifle. That was very interesting to me. It was one of the links in the chain which has given me certain well-set views as to the proper design of rifles, and particularly cartridges, for the most effective work. All of my own experiments, and I may say that of the Ordnance Office as well, seem to show that with existing powders, and also we might assert with any powders which the modern explosive chemist deems possible for use in rifles within the present knowledge of the science, that the most effective burning will occur when the cartridge cases have a powder capacity equal to about the following:

For .25 caliber, a case equal to the capacity of the 7-mm. case; .28 caliber, a case equal to the capacity of the .30-06 case; .30 caliber, and .35 caliber, a case equal to the capacity of the .300 M. case.

It seems to me, therefore, that in the .300 Holland & Holland Magnum case we have the .30 caliber at its very best. The gentle slope of the shoulder of the case is very desirable. It makes for lower pressure, a better rate in raise of pressure and a better burning of the powder. But we can not get in a rimless case quite the gentle slope that we most desire. We must have a more or less abrupt slope to the shoulder, for we have to rely on the shoulder to hold the head of the case back against the face of the bolt and to insure correct head-spacing. The old rimmed case is much better. Here the rim performs all these functions, and we can have the slope of the shoulder as gentle as we wish. But of course with the rimmed case we must forego all the advantages of the splendid Mauser type of breech action, which is possible only with the rimless case. The rimless case is an evil forced on us by modern breech actions.

Please do not think that the .300 200-grain Western Tool & Copper Works bullet is a poor bullet for accuracy. It is a far better bullet for target work than nine-tenths of the target bullets. I should not hesitate to use this bullet in an important long-range match. It would give a good account of itself. Therefore, while your ammunition was perfectly suited to hunting, it was also a perfectly fine target lead.

The rather slow 14-inch twist in your barrel is also an advantage. A 10-inch twist is given to .30-caliber Government barrels because in a military weapon it is necessary to think of steady flight at extremely long ranges, even beyond 1,500 yards, and for simplicity we rifle our machine gun and rifle barrels alike, and make the ammunition the same. It is an advantage to have the twist as slow as will successfully spin the bullet to the longest range we intend to use the weapon. A slow twist means less breech pressure, and less deforming of the bullet in the bore, also less friction. Less breech pressure and less friction mean longer life for the barrel, and they may also mean a better burning of the powder. In .30-caliber, when we use first-class modern bullets, we

can get fine accuracy with a 14-inch twist, probably to 1,000 yards at least, although at 2,000 yards (which range we are not interested in in the slightest from the sporting viewpoint) we might get keyholing of the bullet. But with the relatively poorly constructed bullets of fifteen years ago a 10-inch twist was probably necessary to successfully deliver the bullets, even for such a relatively short range as 300 yards.

There is one thing that I do not think you have given sufficient thought to. You state that the group which you shot was fired from a simple elbow rest, with no sandbag and with no gunslings and with iron sights. At once there enters into my mind the thought, "Was it a lucky group? Did the shooter tremble a little, and make errors of aim, that exactly corrected for the error of the rifle and ammunition? Would a group properly fired with attention to all the details necessary for reliable accuracy be larger or smaller?" I don't like groups fired under such conditions. There is always the shadow of a doubt. The group would have made much more impression, and would in my opinion have much more surely indicated a gilt-edge rifle, had it been fired from a secure sandbag rest, with gunslings properly adjusted, with the front sight blackened, and with a cup disk in the aperture of the rear sight. I have no doubt the rifle is one of superb accuracy; but there will always be just a shadow of a doubt about such a group.

The recoil. It must be there. A 200-grain bullet speeded up as yours is must give recoil. But the appreciable recoil is missing. You have found it so, and I also was most agreeably surprised at the lack of appreciable recoil in your previous rifle, which I fired. It seems to me that the lack of appreciable recoil is due entirely to the most excellent stock which Griffin & Howe have fitted to your rifle. Such a stock minimizes recoil. The stock is correctly shaped. It fits, and the large butt plate fits the shoulder right in all positions, and spreads the come-back over a large area. The comb does not jump up to punch one in the jaw. It is very different from the stocks with which several of our large arms companies have equipped their latest heavy caliber bolt-action rifles. These stocks are light, poorly shaped, with low combs that jump up with a vicious punch, and with little boy-sized butt plates that jab one painfully in the shoulder, and that slip off the shoulder when fired because they are not given the proper pitch. I would rather shoot 40 rounds with your .300 Magnum than 5 rounds with a .30-06 rifle with a stock similar to one of these recent poorly designed monstrosities.

I thoroughly approve of your rifle. It is a fine weapon—a splendid example of the most modern rifle for large game at comparatively long range. There are no better rifles for such use. I hope you have many opportunities to try it on game and at ranges worthy of it.

#### SCOPE SIGHT FOR CHUCKS

YOUR article in the AMERICAN RIFLEMAN has got me all steamed up for a telescope for my Springfield Sporter, regular N. R. A. gun. What scope would you recommend to use on this rifle for woodchuck-shooting; also what telescope mounts? Any dope you can give me on this will be appreciated.

You are, of course, familiar with the dimensions of this stock, and I thought best to write you before ordering a scope from any of the manufacturers, as I know absolutely nothing about them, and would like to have you tell me what I ought to have.—P. C. E.



Answer (by Colonel Whelen). For woodchuck-shooting it is extremely essential that you be able to adjust the telescope sight with the greatest accuracy, so that the rifle will shoot exactly where it is aimed at a given range, and to keep it in such adjustment. For example, with ammunition giving a muzzle velocity of 2,700 f. s. or over, the telescope should be kept in such perfect adjustment that the bullets will strike exactly where aimed at 200 yards. They will then strike about 2½ inches high at 100 yards, and about 9 inches low at 300 yards. For ranges from 25 to 75 yards, and 150 to 225 yards, you aim exactly where you want to hit. For other ranges you hold higher or lower, as above.

The only kind of telescope sights that can be kept in this perfect adjustment are those having micrometer adjustments for both elevation and windage reading accurately to half minutes of angle—that is, to half an inch per 100 yards of range. This means target telescope sight; and practically confines one to the Fecker and Winchester telescopes with Fecker precision mountings or Winchester mountings, including the Winchester No. 2 rear mount. Such target telescopes are not satisfactory for general hunting, but for woodchuck-shooting they are ideal. They are also perfectly adapted to the sporting type of Springfield rifle, and to the stock thereof. The bases for the mountings should be screwed to the top of the barrel, 7.2 inches between centers, the rear base close to the receiver. It is strongly advised that the rifle be sent to either Fecker or the Winchester company to have the bases fitted correctly to the barrel, giving directions for fitting as above. Many gunsmiths put these bases on the barrel in a very inferior manner.

The Fecker telescope sights are slightly superior to the Winchester, but are more expensive. Still they are worth the difference. I advise as the very best the Fecker 6-power telescope with 1½-inch objective, Pope rib, and Fecker precision mountings; and as the cheapest efficient glass, the Winchester type A5 power glass with flat top-post reticule and Winchester No. 2 rear mounting. The power should not be greater than 6.

Please see also the letter on target telescope sights in the *Dope Bag* for May. As you say you know nothing about telescope sights, you ought really to study the matter fully before you buy or start to use one; otherwise you are almost certainly doomed to failure, and I strongly advise that you read Captain Crossman's book, "Small-Bore Rifle-Shooting," which contains a large chapter on telescope sights, going into the matter in great detail and making everything perfectly plain.

May I also suggest that, until you take up the reloading of your own ammunition, for woodchuck-shooting you use the Remington .30-06 Hi-speed cartridge loaded with 110-grain bullet; muzzle velocity, 3,500 f. s.

#### REVOLVER SAFETIES

I HAVE a .38 Smith & Wesson target revolver, and a .455 Smith & Wesson British Army service revolver, the former of which is safe against discharge from an external blow on the hammer, while the latter can be fired from such an accidental blow. I did not know this until I read your comments to this effect in your book on revolvers and pistols, and then verified it by experiment. The questions I wish to ask are—

Can the .455 Army gun be made safe by milling an extra notch or recess in the cylinder to engage the cylinder lock bolt and hold the cylinder from rotation when the hammer is down, but not opposite a

primer? It seems to me that in this way it would be unnecessary to carry one chamber empty. Of the three Smith & Wesson .455's that I have examined the cylinder lock bolt rises for re-engagement in the notch of the next chamber (the one to be fired) a little after halfway between the two locked positions. Therefore, in order to avoid interference it would be necessary to locate the extra or carrying notch earlier—say about two-fifths of the way onward from the previous notch. Has this scheme been considered before? Is there anything against it? Is there any reason why such an alteration should not be made to arms already issued—by a careful mechanic, of course?

The second question is, Does the above lack of safety apply to the 1917 revolver as well as the .455 British service model? If so, how is safety obtained when using cartridges in clips of three each? In such a method of loading it would of course not be possible to have an empty chamber under the hammer. Are the Colt, Model 1917, and the Colt New Service models equipped with the positive safety, or do they require an empty chamber under the hammer?

Answer (by Major Hatcher). The .455 British and the model of 1917 .45 Smith & Wessons do not have a special hammer block such as incorporated in the .38 Special, but they do have a safety device of a kind. This is a rebound block in the bottom of the frame of the gun. When the pressure is released on the trigger, this rebound block slides under the hammer, and there is a small projection on the bottom of the block which is supposed to prevent the hammer from driving forward, so the primer can be fired.

However, this rebound block is working at a very severe mechanical disadvantage in trying to stop the hammer, because the contact surface is very close to the pivot, and a moderate blow on the end of the hammer will produce very great pressure at this point of contact and the hammer will spring somewhat. Also, if this rebound block is not very carefully fitted, it will allow the hammer to go forward enough under the blow to strike the primer. I know of two fatal accidents in which guns of this type have gone off when dropped in spite of the rebound block.

I never thought of doing what you suggest for making the gun safe—that is, milling a notch to hold the cylinder with the hammer just off the primer. I don't know anything against this scheme, and don't know why it could not be accomplished as you suggest.

The Colt New Service model and the Colt model of 1917 have a hammer block, called the "Colt Positive Block," which renders the gun safe.

During the war the Army depended on the rebound block mentioned above for safety and carried the full six cartridges in the Smith & Wesson gun.

#### THE LYMAN FRONT SIGHT RAMP

(Continued from page 20)

If a portion of the filed upper surface shows, it may be reblued in a few minutes in the niter pot, or oil-blued in a minute or two, without damage to the rest of the finish. Any of the hooded front sights look exceedingly well on a ramp like this. A sight cover can also be easily made by slotting a piece of shelby tubing, and milling, sawing or filing a shallow groove on each side of the ramp, into which the edges of the tubing cover will slip. Personally I think such a sight cover is usually more ornamental

than useful, and you usually lose it in the woods anyhow.

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[EDITOR'S NOTE.—Since this article was written by Mr. Baker we have been advised by the Lyman Gun Sight Corporation that they will supply the ramp with standard dovetail cross slot as well as slot for blade sight. If style of sight is not specified in the order, the ramp will be furnished slotted longitudinally for the blade sight. The price is the same for either type.]



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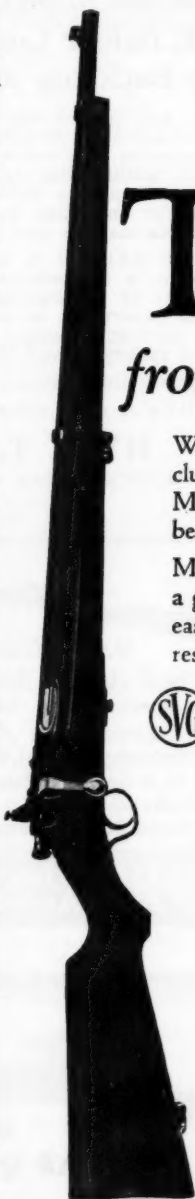


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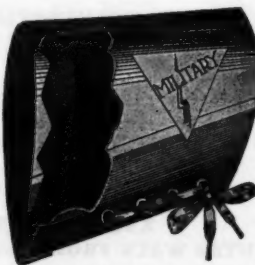
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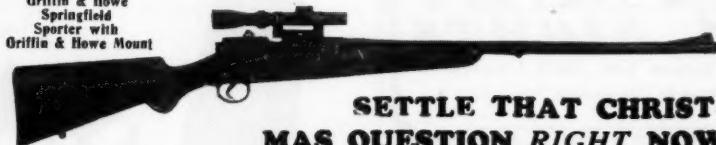
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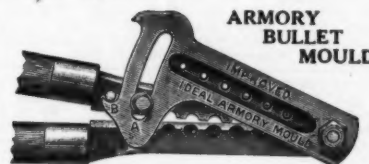
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**FOR SALE**—Hartford .22 automatic pistol, new condition, 3 magazines, \$15; Hartford single-shot .22 pistol, new condition, \$15; Remington .44 cap-and-ball revolver, new condition except bluing worn, \$8.50; Krag bayonets, with scabbards, fine, \$1 each; Winchester .45 Express mould, 330-grain bullet, never used, \$2.50; Springfield .30-06 stock, complete, as issued, \$2.25. No trades. C. R. Jeffries, 137 Nevins St., Lancaster, Pa. 11-28

**FOR SALE**—Springfield .30 free rifle, completely equipped, very accurate. S. R. Hinds, Fort Leonard Wood, Mo. 11-28

**FOR SALE**—22-32 S. & W., fine, \$18. .38 Special 10-inch, single-shot pistol, perfect inside, \$14. Ezra Carpenter, Owls Head, N. Y. 11-28

**FOR SALE**—Almost new Winchester Enfield, Model 1917, caliber .30-06, Government, \$35; brand-new, factory grease, Winchester Tournament grade .97 Model 12-gauge shotgun, cost \$71, for \$50; Winchester, late Model 52 and 5A scope, outfit perfect, for \$60; several Winchester single-shots, poor barrels, in large calibers, at \$5 each. Kesseys Gun and Tackle Shop, Coeur D'Alene, Idaho. 11-28

**WANTED**—Paterson and Walker Colt revolvers. Colt dragons, shoulder stocks and cylinder rides. B. C. Smiley, Angola, Ind. 11-28

**SELL**—Police Positive Special 4-inch barrel, .38 Special, new and perfect inside and out, with a real holster, \$20. M. H. Barnes, 505 Couch Bldg., Portland, Ore. 11-28

**EVERY CLUB** should have a Hubalek machine rest to test rifles and ammunition. New model just out, \$25. A. Hubalek, 744 Willoughby Ave., Brooklyn, N. Y. 12-28

FOR SALE—One 5A telescope, new, with micrometer mounts, used 5 times, \$28. B. Lathe, 2303 N. 7th St., Clinton, Iowa. 11-28

WANTED—High-power scope with stand. Please state make, power, price and conditions. O. N. Whitehead, Wallingford, Conn. 11-28

FOR SALE—M1 .22 Springfield, crank condition, sling, Fecker scope blocks, \$31; Smith Specialty grade, single trap, 34-inch, ventilated rib, perfect, \$70; new model .45 Colt automatic, service holster, extra shoulder holster, perfect, \$27.50. E. V. Menefee, Rising Sun, Ind. 11-28

WANTED—Krag, Russian, .45 auto, and .30-30 cartridges; also .30-30 Winchester carbine. D. O. Amstutz, Ransom, Kans. 11-28

SALE—32-20 S. & W. 6-inch, with grooved trigger and special Call gold bead set in front sight, \$29. WANTED—Best .45 S. & W. 1917 Army, \$15 cash will buy. Ray Welker, 406 N. Harvey, Oak Park, Ill. 11-28

FOR SALE—Marlin .38-55, fine, \$12; gun books; reloading tools; cartridges for collectors. List, 5 cents. Fred Wainwright, Grayling, Mich. 11-28

FOR SALE—\$125 Mauser .30-06, scope, engraved, and new, \$85. Other guns for sale or trade. Frank Salisbury, Reinbeck, Iowa. 11-28

SELL—2 Marlin Model 93 rifles, full magazine, .32-40 octagon barrel, .32 Special round; one .32 Special Marlin carbine, 2/3 magazine, never fired, in factory grease, \$26 each. D. C. Walford, 909 Pa. Ave., Washington, D. C. 11-28

FOR SALE—Belding & Mull 3X hunting scope, TH mount, cost \$65, sell \$35, good as new. Geo. M. Spahr, Frankfort, Ind. 11-28

FOR SALE—One very fine .30-06 heavy International Springfield, \$125; one .22-caliber Martini, duplicate of rifle used by 1928 American team. Laurence Nuesslein, 5209 Conn. Ave., Washington, D. C. 11-28

FOR SALE—New .32-20 S. & W. blue 6-inch barrel with holster, and some shells, shot but a few times, in perfect condition, \$25. O. Homer, 728 State St., Erie, Pa. 11-28

SELL—Remington 10-T ventilated-rib trap gun, \$75; Colt New Service target .44 Russian, 6½-inch barrel, \$30; S. & W. .22 straight line, \$25; prewar .44 Special triple-lock encased ejector, \$35. All in crane condition. Plain .22 Ballard action and stock, \$7; Colt .32 auto, new, \$17; Colt .45 auto, latest model, new, \$30. Earl J. Russell, Monmouth, Ill. 11-28

FOR SALE—Genuine, unused, Schuetzen Ballard .22-caliber barrels, beautifully rifled, but otherwise unfinished, \$17 each. I have Ballard, Bullard, Maynard, Wesson, Sharps, Lee .236, Remington, Government Sporter and Kentucky rifles in fine shape. P. L. Johnson, 5904 Harvard St., Pittsburgh, Pa. 11-28

WANTED—Schuetzen stock and fore end for single-shot Winchester rifle, or complete rifle regardless of condition. Laurence Nuesslein, 5209 Conn. Ave., Washington, D. C. 11-28

SALE OR TRADE—Heavy action (only) Martini, \$10; .310-caliber light Martini, by W. W. Greener, \$23; .22-32 S. & W., perfect condition, Marble gold bead, Heiser holster, \$27. H. Spencer, 4324 McPherson, St. Louis, Mo. 11-28

WANTED—Marlin 16-gauge, visible hammer, repeating shotgun. Will exchange 12-gauge. Julius F. Zeiss, 4465 Townsend Ave., Detroit, Mich. 11-28

SELL—45-90 Winchester, Model 1886, octagon barrel, perfect inside, some rust on receiver and magazine, stock and fore end perfect; 45-90, same as above, except fancy pistol grip, stock checked and set trigger. R. C. Skaggs, 2040 Gerber Ave., Sacramento, Calif. 11-28

FOR SALE—National Match Springfield in very good condition. Consider trade for 12-gauge shotgun. Dr. W. B. Lewis, Webster City, Iowa. 11-28

FOR SALE—A high-grade, highly engraved double muzzle-loading shotgun; Krag rifle with 24-inch barrel; .30-06 Niedner type seating tool, with Ideal sizing die. All in crane condition. C. C. Snavely, Thiensville, Wis. 11-28

TRADE—Colt single-action .32-20 for .22 or .45 revolver; pay difference. R. D. Sharpe, Fort Stockton, Tex. 11-28

TRADE—256 Newton double set triggers, sole-leather case, for Springfield Sporter or National Match. Leonard Berggren, Alexandria, Minn. 11-28

TRADE—Electric train, accessories, needs slight repairs, for .25-20 rifle. 315 Sagamore Drive, Irondequoit, N. Y. 11-28

FOR SALE—Custom-made .22 long-rifle target pistol, tip-up, Stevens heavy rifle action, 10-inch barrel, weighs 3½ pounds, in walnut case, \$35; trade for good B. S. A. .22, with perfect bore. Winchester .22 long-rifle Schuetzen, 28-inch No. 4 barrel, double set, palm rest, cheekpiece, Schuetzen stock, very accurate, \$50; commercial nickel-plated .45 Colt auto, \$20; commercial .45 New Service, 5½-inch barrel, \$18; Kahles 4-power hunting scope, \$12; New Remington Express stock, \$6; can alter 1917 Enfield magazine to fit stock and bed barrel for \$5; 400 rounds 7.65 Luger, mostly Western Lubaloy, \$15; .45 (rim) Frankford for New Service revolver, \$3.50 per 100. WANTED—Fecker with mounts. Fine rifle stocks and remodeling. Reasonable rates. Express address, Antigo. Alvin Linden, Bryant, Wis. 11-28

FOR SALE—Brand-new .22 target pistol, Stevens offhand 8-inch barrel, \$10; Stevens favorite, guaranteed perfect, Marble peep, \$5. C. Roth, 2884 Ash, Denver, Colo. 11-28

FOR SALE—Sharps target rifle, .40-65 caliber in new condition, half-octagon barrel, full pistol grip, checkered, windgauge target sights, bronze Schuetzen butt plate, \$75; Ballard, .32-40 caliber, target sights, pistol grip with cheekpiece, beautiful shape, with reloading tools, \$65; S. B. Winchester, .38-55 caliber, set triggers, target sights, with loading tools, like new, \$65; S. B. Winchester, .25-20 caliber, target sights, like new, \$30; Winchester, Model 1895, .30-40 caliber, Lyman sights, never shot, \$30; Winchester, .32-20 caliber, Model 1892, round barrel, takedown, A1 condition, \$25. W. S. Morris, P. O. Box 576, Plainfield, N. J. 11-28

FOR SALE—Winchester .25-35 rifle, round barrel, in factory grease, \$26. J. P. Rehling, 5532 S. Seeley Ave., Chicago, Ill. 11-28

FOR SALE—Lee Enfield, caliber .303 British, accessories, \$20. W. C. Burnett, Box 885, Corpus Christi, Tex. 11-28

FOR SALE—New Winchester 54, .30-06, stainless barrel, special high comb stock, B. & M. scope, bases, sling and rod; complete reloading set, new mould, dies, components, etc. Will take Colt .22 automatic. Geo. Gustin, Wabash Co. Loan & Trust, Wabash, Ind. 11-28

FOR SALE—A SNAP—\$70 Hamilton, 21-jewel, 16-size, railroad watch, \$43; also \$50, 12-size, Illinois autocrat, \$35. Both new, perfect, never used. Chas. R. Gould, Denver, Colo. 11-28

SALE—35X Vion spotting scope, excellent, \$15; .30-06 Springfield sporter, checked oil-finished, P. G. stock, Howe-Whelen sleeve sight and safety, B. & M. 3X scope, low mount, absolutely perfect, machine rest target and star-gauge record furnished. E. M. Hoskinson, Lincoln, Nebr. 11-28

SELL—Winchester 5A scope, with mounts, O. K.; \$25 postpaid. J. C. Fritz, 215 E. Foster Ave., State College, Pa. 11-28

SELL—Brand-new B. & M. bullet-puller and cartridge gauge, \$6.50; new Modern Bond C loading tool, complete, for .30-06 and .30-30, \$12; new Modern Bond Ne. 80 scales, \$17; .30-06 Remington Express rifle, like new, \$36.50; case 1,140 .30-06 cartridges, \$14; 100 .30-06 Western tool copper bullets, \$2. Carl Opperman, 748 Fourth, W., Medford, Oreg. 11-28

SALE—Cartridges for collectors. WANTED—46 R. F. Smith & Wesson revolver; also 46 R. F. Remington revolver, 7.62-mm. Russian Nagant revolver. S. J. Staggers, 212 S. 42nd St., Philadelphia, Pa. 11-28

FOR SALE—Springfield '06 match rifle with Howe-Whelen rear sight, Lyman No. 17 front scope blocks, sling, 100 cartridges, in gun-crank condition, fired less than 100 times. First money order of \$50 takes it. M. Soley, Edridge, Calif. 11-28

FOR SALE—New russet-leather shooting bags, made from United States saddle bags, satisfaction guaranteed, \$4.50; International aluminum butt plates for Winchester 52 and Springfield 1922, finished and highly polished, \$2.25; adjustable aluminum International butt plates, for Springfield, \$5; bronze palm rests for Springfield, \$10; New Kerr adjustable web slings, 75 cents; used leather Service slings, 75 cents; leather sling supports, 75 cents; sheepskin pads, elbows each, 75 cents, shoulders each, \$1; used Army cotton coats, sizes 34-40, to be padded for shooting coats by buyer, \$1.25; leather-bound canvas full-length gun cases, \$3.50; Parker celluloid-covered cleaning rods, with jag, .22-caliber, \$1.90; all accessories for rods in stock; cleaning patches per hundred, 25 cents; Chloroil, 35 cents; sperm oil, per pint, \$1; 20X spotting telescopes, \$12; folding hardwood telescope stands, \$2.50; used Winchester B5 rifle telescopes, with brand-new Winchester micrometer mounts four-power, \$24.50, three-power, \$22.50; boiled linseed oil, per pint, \$1; new B. S. A. Martini action, .22-caliber target rifles, \$48; new-style Savage bolt-action, .22-caliber, five-shot sporters, \$18.50; Webley .22-caliber air pistols, \$15. Chester Nikodym, Box 1797, Cleveland, Ohio. 11-28

WANTED—Loading tool, including mould, for .45-70 Government 405- or 500-grain bullet; Ideal No. 6 preferred. Porter K. Riblet, 438 East 7th, Erie, Pa. 11-28

FOR SALE—Winchester 54, Lyman 48 sight, can not be told from new gun, \$35; Martini 1899 .38-55 smokeless-steel barrel, checked stock, good shooting condition with case, \$12. Joe. Brauneis, Greenwood, Wis. 11-28

WANTED—40-99 S. S. cartridge cases; full-length resizer, loading tool; .38-40 single action. R. J. Gates, Jr., Mount Airy, Pa. 11-28

FOR SALE—F. A. Resizing dies, .45-70, \$1.35; .45 Colt (revolver), \$1.25; .30-caliber neck resizing, 65 cents; .38 short Colt O/L, .45-70-405, .50-70-450 moulds, \$1.35 each; .36-caliber 2-ball moulds, \$1.85. C. & B. revolvers, nipples, wrenches, cylinders, spare parts. Transportation extra. B. K. Wingate, Box 481, Reading, Pa. 11-28

FOR SALE—Colt Bialeys, .45 7¼-inch barrel, .38 7½-inch barrel, factory condition, \$40 each; .45 automatic Colt, fine pearl stock, barely shows use, shot 25 times, absolutely perfect inside barrel, \$32.50; .45 automatic Colt, checked grip and trigger, factory condition, \$27.50; .38 S. & W. safety, hammerless, 3¼-inch barrel, nickel, ivory stocks, factory condition, and box cartridges, \$22; .45 Bialeys Colt, 4¼-inch barrel, outside shows holster wear, mechanically perfect; rifles fine in barrel, but show slight rust stains, not pitted, \$27.50. Will ship C. O. D. subject to examination upon deposit. D. B. Conley, Swampston, Ky. 11-28

FOR SALE—1 Waffenfabrik Mauser Oberndorf A Neckar, 7.63-mm. carbine pistol, stock holster, 6-inch barrel, good condition, \$30. G. W. Martin, Lake Placid Club, Essex Co., N. Y. 11-28

FOR SALE—Some valuable old guns for collectors, flint locks, shooting condition. Write for description. Wilson, 53 Main, Stamford, Conn. 11-28

WANTED TO SELL—16 boxes of .38-70 Winchester cartridges. J. F. Milhon, 1373 Hamlet St., Columbus, Ohio. 11-28

FOR SALE OR TRADE—Westley Richards double 10-gauge, hammerless, 32-inch Damascus barrels, both full choke, Hawkins pad, excellent engraving, Circassian stock. Cost over \$500 in England. H. O. Russell, c/o Federal Cartridge Corp., 122 S. 6th St., Minneapolis, Minn. 11-28

WANTED—Quackenbush .22 long rifle, must be in good condition, also Remington single-barrel 12-gauge. Clarence A. Marsh, Orlando, Fla. 11-28

SELL—Frankford Arsenal powder measure, like new, used one year, \$4.75. Money order accepted only. Paul Neuland, Morrisville, Vt. 11-28

SELL—Winchester 55, .30-30, shot 20 times, machine condition, \$35. Chas. H. Butt, Box 1623, Dallas, Tex. 11-28

WANTED—Ideal No. 4 tool, .32 S. & W., A1 condition. Wenzel A. Panoah, 713 N. Water St., Manitowoc, Wis. 11-28

WANTED—Winchester, '86 Model, .33-caliber, half-magazine, good condition. V. C. Richardson, Loyal, Wis. 11-28

SALE—Peterson-Stevens super-accurate larger .22, prone stock, high cheekpiece, machine rest, test gives 1¼-inch groups at 100 yards with N. R. A. and Western targets furnished, scope blocks, no sights, \$55; Model 52 Winchester used but accurate, built-up comb, bum job, as is, \$20. Draft or money order. Paul R. Neal, Greenleaf, Kans. 11-28

SELL—12-gauge Smith field grade, double modified and full, \$25; Lefever .410 double, \$17. Both practically new. E. Denhayes, Dragon, Utah. 11-28

FOR SALE—Colt .22 automatic, barrel perfect inside, outside has small vise mark, with holster, \$18; Colt .45 New Service, 5¼-inch barrel, perfect condition, \$15. W. H. Hillman, P. O. Box 741, Buffalo, N. Y. 11-28

WANTED—Pin-fire shells for old shotgun, 16-gauge, large shot preferred, state price. Melvin Cross, Chappaqua, N. Y. 11-28

SHIFT WITH THE HOUSE OF SHIFF that sixty years ago, this month, began perfecting methods of exchange of strictly hi-grade guns that have proved satisfactory and absolutely protected BOTH parties. More articles were exchanged during last August than during the first three years. Current lists for stamp. Glad to refer to old customer right in your own vicinity. CHINCHILLAS. 11-28

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FOR SALE—Stereo-Prism Binoculars, 6 x 30, used, but they have been cleaned and are good as new, price, \$17.50. If not satisfactory, money refunded. A real bargain. Jim Craton's, 221 Harrison St., Davenport, Iowa. 11-28

FOR SALE—International Match Springfield, heavy barrel, 28-inch, Lyman 48C, hooded front pistol grip and fore arm, checked scope blocks, palm rest, very accurate, new, Niedner built, \$100. Will take engraved Ballard action for part pay. Frank Tice, Bellefontaine, Ohio. 11-28



**FOR SALE**—A Catalogue of Firearms for the Collector. All models and calibers alphabetically arranged up to date. Circular free. A good book for Christmas. Praise by experts. Money back guarantee. Price, \$3.50 postpaid. L. D. Satterlee, 458 Forest West, Detroit, Mich. 11-28

**SELL**—Lever-action Marlin, .22, perfect, \$18, or exchange for nature books. Samuel Wigdorowitz, 309 East 91st St., New York, N. Y. 11-28

**SALE OR TRADE**—Brand-new commercial, improved model Colt .45 automatic, with holster, \$30; or trade for late model, portable typewriter. C. Richmond, 10 Williams St., Bradford, Pa. 11-28

**FOR SALE**—20-gauge Marlin pump, full choke, slightly used, \$25. Wm. McNair, Box V, Lakeport, Calif. 11-28

**SALE OR TRADE**—45 Colt auto., good condition. **WANT**—Springfield, rifle telescope, 52 Winchester. Ed Foster, Gowanda, N. Y. 11-28

**SELL**—Excellent Lugers 9-mm., dated 1896, 6-inch one dated 1912, short barrel, also 7.65 with U. S. shield, grip safeties and extras. Wylie, 2 Aberdeen Rd., Arlington Heights, Mass. 11-28

**SALE**—22 long-rifle Winchester Schuetzen, new 30-inch barrel, No. 3 S. S. trigger, \$25; 22 long-rifle Ballard Schuetzen, 30-inch Winchester, No. 3 barrel, D. S. triggers, \$25; Colt S. A. .45, Allen Wheelock .45, \$10. George Fohs, 271 Rose St., Newark, N. J. 11-28

**FOR SALE**—380-caliber Remington automatic pistol, Heiser holster, crank condition, \$12. Russel Johnson, 85 Boston Ave., West Medford, Mass. 11-28

**WANTED**—1 copy March, 1928, issue THE AMERICAN RIFLEMAN. Edward Armstrong, Jr., Hercules, Calif. 11-28

**FOR SALE**—One .35 Remington auto-loading rifle, excellent condition, \$35. Laurence Nusslein, 5209 Conn. Ave., Washington, D. C. 11-28

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At Left: "Larry" Neusslein, Washington, D. C., winner of International Small-Bore Championship three times with U. S. .22 N. R. A.'s.



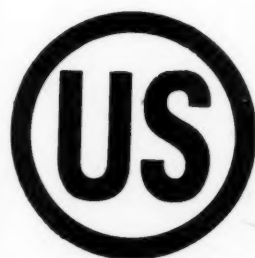
At Right: Composite of championship targets shot by Neusslein at Ockenburgh, Holland. Score: 193 x 200 at 50 meters.

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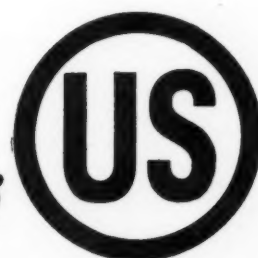
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